Colorado Department of Public Health and Environment

OPERATING PERMIT

International Business Machines (IBM)

First Issued: July 1, 2003
Renewed: January 1, 2013
Last Revised: October 7, 2013

AIR POLLUTION CONTROL DIVISION
COLORADO OPERATING PERMIT

FACILITY NAME:	International Business Machines	OPERATING PERMIT NUMBER
FACILITY ID:	0130006	**99OPBO223**
RENEWED:	January 1, 2013	
EXPIRATION DATE:	January 1, 2018	
MODIFICATIONS:	See Appendix F of Permit	

Issued in accordance with the provisions of Colorado Air Pollution Prevention and Control Act, 25-7-101 et seq. and applicable rules and regulations.

ISSUED TO:

International Business Machines
P. O. Box 1900, Int. Zip 001B
Boulder, CO 80301

PLANT SITE LOCATION:

6300 Diagonal Highway
Boulder, CO 80301
Boulder County

INFORMATION RELIED UPON

Operating Permit Renewal Application
Received: November 22, 2011
And Additional Information Received: September 30, 2011

Nature of Business: Provider of Computer-Related Services
Primary SIC: 7379

RESPONSIBLE OFFICIAL

Name: John Terela
Title: Site Operations Manager
Phone: (303) 924-6464

FACILITY CONTACT PERSON

Name: Chuenarun Dischner
Title: Environmental Engineer
Phone: (303) 924-4993

SUBMITTAL DEADLINES

Semi-Annual Monitoring Periods:	January 1 – June 30, July 1 – December 31
Semi-Annual Monitoring Reports:	Due on August 1, 2013 & February 1, 2014 & subsequent years
Annual Compliance Period:	January 1 – December 31
Annual Compliance Certification:	Due on February 1, 2014 and subsequent years

Note that the Semi-Annual Monitoring Reports and Annual Compliance Certifications must be received at the Division office by 5:00 p.m. on the due date. Postmarked dates will not be accepted for the purposes of determining the timely receipt of those reports/certifications.

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SECTION I - General Activities and Summary

1. Permitted Activities

1.1 This source is classified as a provider of computer-related services under Standard Industrial Classification 7379. Specific emission units addressed in Section II of this permit include the following: 36 emergency generators, 2 diesel fire water pumps, 3 cooling water towers (note that one tower is grandfathered from construction permit requirements) and 4 boilers fueled by natural gas, with diesel and/or jet fuel as back-up. Appendix A of this permit includes a list of equipment that are considered insignificant at this facility.

This facility is located in Boulder at 6300 Diagonal Highway, in Boulder County. The Denver metro area, including Boulder, is classified as attainment/maintenance for particulate matter less than 10 microns (PM_{10}) and carbon monoxide. Under that classification, all SIP-approved requirements for PM_{10} and CO will continue to apply in order to prevent backsliding under the provisions of Section 110(l) of the Federal Clean Air Act. The Denver Metro Area is classified as nonattainment for ozone and is part of the 8-hr Ozone Control Area as defined in Colorado Regulation No. 7, Section II.A.1.

There are no affected states within 50 miles of the plant. Rocky Mountain National Park and Eagle's Nest and Rawah National Wilderness Areas, federal class I designated areas, are within 100 km of this facility.

1.2 Until such time as this permit expires or is modified or revoked, the permittee is allowed to discharge air pollutants from this facility in accordance with the requirements, limitations, and conditions of this permit.

1.3 The Operating Permit incorporates the applicable requirements contained in the underlying construction permits, and does not affect those applicable requirements, except as modified during review of the application or as modified subsequent to permit issuance using the modification procedures found in Regulation No. 3, Part C. These Part C procedures meet all applicable substantive New Source Review requirements of Part B. Any revisions made using the provisions of Regulation No. 3, Part C shall become new applicable requirements for purposes of this Operating Permit and shall survive reissuance. This permit incorporates the applicable requirements (except as noted in Section II) from the following construction permits: 94BO366, 95BO557, 00BO0630 and 07BO0830.

1.4 All conditions in this permit are enforceable by US Environmental Protection Agency, Colorado Air Pollution Control Division (hereinafter Division) and its agents, and citizens unless otherwise specified. **State-only enforceable conditions are:** Permit Condition Number(s): Section II – Condition 3.7.1. (opacity) and Section IV - Conditions 3.g (last paragraph), 14 and 18 (as noted).

1.5 All information gathered pursuant to the requirements of this permit is subject to the Recordkeeping and Reporting requirements listed under Condition 22 of the General Conditions in Section IV of this permit. Either electronic or hard copy records are acceptable.

2. Alternative Operating Scenarios

2.1 The permittee shall be allowed to make the following changes to its method of operation without applying for a revision of this permit.

2.1.1 No separate operating scenarios have been specified.

3. Nonattainment Area New Source Review (NANSR) and Prevention of Significant Deterioration (PSD)

3.1 Based on the information provided by the applicant, this source is not categorized as a PSD major stationary source as of the issue date of this permit. Any future modification at this facility which is major by itself (i.e. Potential to Emit of $\geq$ 250 tons/year) for any pollutant listed in Regulation No. 3, Part D, Section II.A.42 for which the area is in attainment or attainment/maintenance may result in the application of the PSD review requirements.

In addition, future modifications at this facility may result in the facility being classified as a major stationary source for PSD. Once that threshold is exceeded, future modifications at this facility resulting in a significant net emissions increase (see Regulation No. 3, Part D, Section II.A.26 and 42) for any pollutant as listed in Regulation No. 3, Part D, Section II.A.42 for which the area is attainment or attainment/maintenance may result in the application of the PSD review requirements.

3.2 This source is categorized as a NANSR major stationary source (Potential to Emit of $NO_X \geq 100$ tons/year). Future modifications at this facility resulting in a significant net emissions increase (see Regulation No. 3, Part D, Sections II.A.26 and 42) for VOC or NO_X or a modification which is major by itself (Potential to Emit $\geq$ 100 tons/year for either VOC or NO_X) may result in the application of the NANSR review requirements.

3.3 There are no other Operating Permits associated with this facility for purposes of determining applicability of NANSR and PSD review regulations.

4. Accidental Release Prevention Program (112(r))

4.1 Based on the information provided by the applicant, this facility is not subject to the provisions of the Accidental Release Prevention Program (Section 112(r) of the Federal Clean Air Act).

5. Compliance Assurance Monitoring (CAM)

5.1 The following emission points at this facility use a control device to achieve compliance with an emission limitation or standard to which they are subject and have pre-control emissions that exceed or are equivalent to the major source threshold. They are therefore subject to the provisions of the CAM program as set forth in 40 CFR Part 64, as adopted by reference in Colorado Regulation No. 3, Part C, Section XIV:

None

6. Summary of Emission Units

6.1 The emissions units regulated by this permit are the following:

Emission Unit Number	AIRS Point Number	Facility Identifier	Description	Startup Date	Pollution Control Device
G001 thru G012 & G015 thru G023	088	GS001 thru G012 & G015 thru GS023	Nineteen (19) Emergency Generators and Two (2) Fire-Water Pumps. All Diesel Fuel Fired. Detailed List in Section I, Condition 6.2 of this Permit.	See Table in Condition 6.2	Uncontrolled
G024 thru G027 & G029 thru G031	090	GS024 thru G027 & G029 thru GS031	Seven (7) Emergency Generators. All Diesel Fuel Fired. Detailed List in Section I, Condition 6.3 of this Permit.	See Table in Condition 6.3.	Uncontrolled
B001, B003 & B004	001	BS001, BS003 & BS004	Two (2) Keystone Boilers, Model and Serial Nos. 17228/97125and 17619/97758, rated at 60and 66 MMBtu/hr, Respectively. Each Natural Gas Fired with Diesel and/or Jet Fuel as Backup.	1965 (60 MMBtu Unit) 1968 (66 MMBtu Unit)	Uncontrolled
	011		One (1) Nebraska Type O Boiler, Model No. NOS-2A-58, Serial No. O-4556, rated at 54.4 MMBtu/hr. Natural Gas Fired with Diesel and/or Jet Fuel as Backup.	December 2002	Todd Low NO_X Veriflame Burners
C001, C002 and C003	089, 091 and 093	FC001, FC002 and FC003	Building 011W Cooling Tower, Building 011 Cooling Tower and Building 003 Cooling Tower	B011W - 1987 B011 – 1966 (3 cells), 1969 (add'l 3 cells) B003 – May 2008	Drift Eliminators
G032 thru G040	092	GS032 thru GS040	Nine (9) Emergency Generators. All Diesel Fuel Fired. Detail List in Section I, Condition 6.4 of this Permit.	See Table in Condition 6.4	Uncontrolled
G041	094	GS041	One (1) Caterpillar, Model No. C175-16, Diesel Fired Emergency Generator Set, Rated at 4,423 hp (maximum) and 29.2 MMBtu/hr (213.2 gal/hr). Serial No. WYB00390.	July 2011 Manufactured in 2010	Uncontrolled

Emission Unit Number	AIRS Point Number	Facility Identifier	Description	Startup Date	Pollution Control Device
B002	095	BS002	One (1) Cleaver Brooks Boiler, Model No. 4WG-LN, Serial No. T2817-1-1, Rated at 32.66 MMBtu/hr. This boiler burns natural gas as a primary fuel with distillate oil used as a back-up fuel.	TBD	Low NO_X Burners

6.2 Specific information on the emergency generators and fire-water pumps G001 thru G023 is contained in the below table.

Unit/Stack No.	Rating (hp)	Manufacturer, Model No. and Serial No.	Date Placed in Service
G001/GS001	2,340	Detroit, Model No. 91637416, Serial No. 16E00159	1993
G002/GS002	2,340	Detroit, Model No. 91637416, Serial No. 16D0011665	1993
G003/GS003	2,340	Detroit, Model No. 91637416, Serial No. 16D0011655	1994
G004/GS004	2,498	Caterpillar, Model No. 3516EUI, Serial No. 5SN00623	1999
G005/GS005	1,574.8	Caterpillar, Model No. 3512 SR4, Serial No. 6PA00599	1986
G006/GS006	1,574.8	Caterpillar, Model No. 3512 SR4, Serial No. 6PA00589	1986
G007/GS007	1,574.8	Caterpillar, Model No. 3512 SR4, Serial No. 6PA00601	1986
G008/GS008	1,574.8	Caterpillar, Model No. 3512 SR4, Serial No. 6PA00583	1986
G009/GS009	449	Caterpillar, Model No. 3406 SR4, Serial No. 6BA02186	1986
G010/GS010	166	Onan, Model No. 100 GDB, Serial No. G980768391	1999
G011/GS011	110	Detroit, Model No. 471, Serial No. 4A95022	1966
G012/GS012	155	Caterpillar, Model No. 3304 PC, Serial No. 44BH3649	1978
G015/GS015	120	Caterpillar, Model No. 3304 PC, Serial No. 36BH3004	1978
G016/GS016	194	Caterpillar, Model No. 3208 SR4, Serial No. 6HA00970	1966
G017/SG017	67	Onan, Model No. 50 DDB, Serial No. 1174893614	1977
G018/GS018	2,340	Detroit, Model No. 91637416, Serial No. 16E13124/16E13127	1996
G019/GS019	2,340	Detroit, Model No. 91637416, Serial No. 16E13125/16E13126	1996
G020/GS020	2,340	Detroit, Model No. 91637416, Serial No. 16E13128/16E13123	1996
G021/GS021	1,574.8	Caterpillar, Model No. 3512 SR4, Serial No. 2DN00734	1997
G022/GS022	150	Cummings, Model No. WHS61F, Serial No. 513356 **Emergency Fire Water Pump**	1966
G023/GS023	292	Caterpillar, Model No. 3406B-DIT, Serial No. 6TB23464 Engine Manufactured July 2001 **Emergency Fire Water Pump**	2009

6.3 Specific information on the emergency generators G024 thru G027 and G029 thru G031 is contained in the below table.

Unit/Stack No.	Rating (hp)	Manufacturer, Model No. and Serial No.	Date Placed in Service
G024/GS024	823	Caterpillar, Model No. 3412 SR4B, Serial No. 81Z25453	2001
G025/GS025	2,876	Caterpillar, Model No. 3516, Serial No. 6HN01627	2001
G026/GS026	2,876	Caterpillar, Model No. 3516, Serial No. 6HN01629	2001
G027/GS027	2,498	Caterpillar, Model No. 3516, Serial No. 25Z02324	2003
G029/GS029	3,604	Caterpillar, Model No. 3516CDITA, Serial No. SBK00335	2008
G030/GS030	3,604	Caterpillar, Model No. 3516CDITA, Serial No. SBK00336	2008
G031/GS031	3,604	Caterpillar, Model No. 3516CDITa, Serial No. SBK00348	2008

6.4 Specific information on the emergency generators G032 thru G040 is contained in the below table.

Unit/Stack No.	Rating (hp)	Manufacturer, Model No. and Serial No.	Date Placed in Service
G032/GS032	3,604	Caterpillar, Model No. 3516CDITA, Serial No. SBK00334	May 2008
G033/GS033	3,604	Caterpillar, Model No. 3516CDITA, Serial No. SBK00332	May 2008
G034/GS034	3,604	Caterpillar, Model No. 3516CDITA, Serial No. SBK00340	May 2008
G035/GS035	3,604	Caterpillar, Model No. 3516CDITA, Serial No. SBK00339	May 2008
G036/GS036	3,604	Caterpillar, Model No. 3516CDITA, Serial No. SBK00338	May 2008
G037/GS037	3,604	Caterpillar, Model No. 3516CDITA, Serial No. SBK00396	May 2008
G038/GS038	2,937	Caterpillar, Model No. 3516CDITA, Serial No. SBJ00635	December 2008
G039/GS039	2,937	Caterpillar, Model No. 3516CDITA, Serial No. SBJ00634	December 2008
G040/GS040	2,937	Caterpillar, Model No. 3516CDITA, Serial No. SBJ00633	December 2008

SECTION II - Specific Permit Terms

1. Units G001 thru G012 and G015 thru G023: Internal Combustion Engines, Diesel Fuel Fired

Nineteen (19) Emergency Generators and Two (2) Fire Water Pumps

Parameter	Permit Condition Number	Limitations Short Term	Limitations Long Term	Compliance Emission Factor	Monitoring Method	Monitoring Interval
Total Emission Limits from All Units :	1.1.				Recordkeeping and Calculation	Monthly
PM		N/A	2 tons/yr	See Condition 1.1.		
PM_{10}			2 tons/yr			
NO_X			41.6 tons/yr			
CO			14.8 tons/yr			
Units G011, G016 & G022: SO_2	1.2.	**Applies to Each Engine:** 1.5 lbs/MMBtu		N/A	Fuel Restriction	See Condition 1.2.
All other Units: SO_2		**Applies to Each Engine:** 0.8 lbs/MMBtu				
Units G009 thru G012, G015 thru G017, G022 & G023: Total Diesel Fuel Consumption	1.3.	N/A	6,870 gal/yr	N/A	Calculation	Monthly
Units G001 thru G008 & G018 thru G021: Total Diesel Fuel Consumption	1.4.	N/A	106,996 gal/yr	N/A	Calculation	Monthly
Fuel Sampling	1.5.	N/A	N/A	N/A	ASTM Methods	See Condition 1.5.
Units G001 thru G004, G010, and G018 thru G021: RACT - VOC Emissions	1.6.	RACT is Determined to be Good Combustion Practices and Use of Low Sulfur ($\leq$ 0.05 % by weight) Diesel Fuel		N/A	Certification	Annually
All Units: RACT - PM_{10}, CO and NO_X Emissions	1.7.	RACT is Determined to be Good Combustion Practices and Use of Low Sulfur ($\leq$ 0.05 % by weight) Diesel Fuel		N/A	Certification	Annually
Hours of Operation	1.8.	N/A	N/A	N/A	Recordkeeping	Monthly

Parameter	Permit Condition Number	Limitations Short Term	Limitations Long Term	Compliance Emission Factor	Monitoring Method	Monitoring Interval
Opacity	1.9.	Not to Exceed 20% Except as Provided for Below		N/A	EPA Method 9	Annually
		For Certain Operational Activities – Not to Exceed 30%, for a Period or Periods Aggregating More than Six (6) Minutes in any 60 Consecutive Minutes		N/A		

1.1 **Total** air pollutant emissions **from all engines** shall not exceed the above limitations (Colorado Construction Permit 95BO557). Compliance with the emission limitations shall be monitored by calculating emissions monthly using the emission factors in the table below:

Unit	PM lbs/10^3 gal	PM_{10} lbs/10^3 gal	NO_X lbs/10^3 gal	CO lbs/10^3 gal	Source of Emission Factor
2498 hp unit: G004	2.5	2.5	730	260	PM, PM_{10} and VOC are manufacturers' guarantee, CO and NO_X from December 1997 stack test on one 2340 hp unit
2340 hp units: G001, G002, G003, G018, G019 & G020	9.55	7.85	730	260	PM and PM_{10} from EPA's FIRE, Version 6.21, dated May 99, SCC 2-02-004-01, CO and NO_X from December 1997 stack test on one of these units and VOC is manufacturers' guarantee.
1574.8 hp units: G005, G006, G007, G008 & G021	5.55	5.55	379	55	PM, PM_{10} and VOC are manufacturers' guarantee, CO and NO_X from March 2001 stack test on one of these units
Units less than 600 hp: G009 thru G012, G015 thru G017, G022 & G023	42.5	42.5	379	55	PM, PM_{10} and VOC from EPA's FIRE, Version 6.21, dated May 99, SCC 2-02-001-02, CO and NO_X from March 2001 stack test on one of the 1574.8 hp units

Monthly emissions, **from each engine**, shall be calculated by the end of the subsequent month, using the above emission factors in the following equation:

$$\text{tons/mo} = \frac{\text{EF (lbs/}10^3\text{ gal) x monthly fuel consumption (gal/mo)}}{\text{2000 lbs/ton}}$$

Monthly emissions from each engine shall be summed together and a twelve month rolling total of the emissions shall be used to monitor compliance with the annual limitations. Each month, a new twelve month total shall be calculated using the previous twelve months data.

1.2 Sulfur Dioxide (SO_2) emissions shall not exceed the following limitations:

1.2.1 **Applies to engines G011, G016 and G022**: Sulfur Dioxide (SO_2) emissions **from each engine** shall not exceed 1.5 lbs/MMBtu (Colorado Regulation No. 1, Section VI.A.3.b.(i)).

1.2.2 **Applies to the remaining engines:** Sulfur Dioxide (SO_2) emissions **from each engine** shall not exceed 0.8 lbs/MMBtu (Colorado Regulation No. 1, Section VI.B.4.b.(i)).

In the absence of credible evidence to the contrary, compliance with the above SO_2 limitations shall be presumed provided the fuel sampling required by Condition 1.5 demonstrates that the fuel has a sulfur content no greater than 0.05% sulfur and a heat content no less than 49,600 Btu/gal.

1.3 **Total** Consumption of Diesel Fuel **from engines G009 thru G012, G015 thru G017, G022 and G023** shall not exceed the above limitations (Colorado Construction Permit 95BO557). Compliance with the diesel consumption limits shall be monitored by determining, by the end of the subsequent month, fuel consumption **from each engine**. Fuel consumption from each engine shall be determined by multiplying the maximum hourly fuel consumption rate of the engine (see table below, from Title V Operating Permit Application submitted on 12/21/99) by the hours the engine was operated in the month.

Engine	Horsepower	Maximum Hourly Fuel Rate
G004	2498 hp	118.9 gal/hr
G001 – G003	2340 hp	115.4 gal/hr
G018 – G020*	2340 hp	115.4 gal/hr
G005 – G008 and G021	1574.8 hp	80.4 gal/hr
G009	449 hp	23 gal/hr
G010	166 hp	7.90 gal/hr
G011	110 hp	5.92 ga/hr
G012	155 hp	8.34 gal/hr
G015	120 hp	6.45 gal/hr
G016	194 hp	10.43 gal/hr
G017	67 hp	3.60 gal/hr
G022	150 hp	8.07 gal/yr
G023	292 hp	14.8 gal/yr

*for each unit (i.e. G019), **two engines** drive one generator. Values shown are **per engine**.

Monthly fuel consumption from each engine shall be summed together and a rolling twelve month total of fuel consumption shall be used to monitor compliance with the annual fuel consumption limitations. Each month a new twelve month total shall be calculated using the previous twelve months data.

1.4 **Total** Consumption of Diesel Fuel **from engines G001 thru G008 and G018 thru G021** shall not exceed the above limitations (Colorado Construction Permit 95BO557). Compliance with the diesel consumption limits shall be monitored by determining, by the end of the subsequent month, fuel consumption **from each engine**. Fuel consumption from each engine shall be determined by multiplying the maximum hourly fuel consumption rate of the engine by the hours the engine was operated in the month. Monthly fuel consumption from each engine shall be summed together and a rolling twelve month total of fuel consumption shall be used to monitor compliance with the annual fuel consumption limitations. Each month a new twelve month total shall be calculated using the previous twelve months data.

1.5 Diesel fuel shall be sampled to determine the heat content and weight percent sulfur of the fuel. Each shipment of fuel shall be sampled and analyzed using appropriate ASTM methods or equivalent, if approved in advance by the Division. In lieu of sampling, vendor data may be used to determine the heat content and weight percent sulfur provided sampling and analysis was performed using the appropriate ASTM methods.

1.6 **Units G001 thru G004, G010 and G018 thru G021** are subject to RACT requirements for VOC emissions (Colorado Regulation No. 7, Section II.C.2). RACT has been determined to be good combustion practices (operation according to manufacturer specifications) and use of low sulfur ($\leq$ 0.05 % by weight) diesel fuel.

1.7 **All units** are subject to RACT requirements for PM_{10}, CO and NO_X emissions (Colorado Regulation No. 3, Part B, Section III.D.2.a and b). RACT has been determined to be good combustion practices (operation according to manufacturer specifications) and use of low sulfur ($\leq$ 0.05 % by weight) diesel fuel.

1.8 Hours of operation shall be recorded monthly **for each engine** and used to calculate the monthly fuel consumption as required by Condition 1.3.

1.9 Opacity of emissions **from each engine** shall not exceed the following:

1.9.1 Except as provided for in Condition 1.9.2 below, no owner or operator of a source shall allow or cause the emission into the atmosphere of any air pollutant which is in excess of 20% opacity (Colorado Construction Permit 95BO557 and Colorado Regulation No. 1, Section II.A.1).

1.9.2 No owner or operator of a source shall allow or cause to be emitted into the atmosphere any air pollutant resulting from the building of a new fire, cleaning of fire boxes, soot blowing, start-up, process modifications, or adjustment or occasional cleaning of control equipment which is in excess of 30% opacity for a period or

periods aggregating more than six (6) minutes in any sixty (60) consecutive minutes (Colorado Construction Permit 95BO557 and Colorado Regulation No. 1, Section II.A.4).

Compliance with these limitations shall be monitored by conducting visual emission observations in accordance with EPA Reference Method 9 as follows:

1.9.3 Compliance with the opacity standard in Condition 1.9.2 shall be monitored by conducting visible emission observations in accordance with EPA Method 9, once per year **on each engine**. This opacity observation shall be taken within one (1) hour of the commencement of any of the specific activities identified in Condition 1.9.2 and every 24 hours thereafter until that activity is completed.

1.9.4 An opacity observation shall be conducted annually (calendar year period) **on each engine** to monitor compliance with the opacity limit in Condition 1.9.1. Annual opacity observations for each engine shall be separated by a period of four (4) months.

If an engine is operated more than 250 hours in any calendar year period, a second opacity observation shall be conducted for that engine. If two opacity readings are conducted in the annual (calendar year) period for an engine, such readings shall be conducted at least thirty days apart.

1.9.5 If an engine is not operated during the annual (calendar year) period, then no opacity observations (specified in Conditions 1.9.3 and 1.9.4) are required for that engine.

1.9.6 Subject to the provisions of C.R.S. 25-7-123.1 and in the absence of credible evidence to the contrary, exceedance of the opacity limit shall be considered to exist from the time a Method 9 reading is taken that shows an exceedance of the opacity limit until a Method 9 reading is taken that shows the opacity is less than the opacity limit.

1.9.7 All opacity observations shall be performed by an observer with current and valid Method 9 certification. Results of Method 9 readings and a copy of the certified Method 9 reader's certificate shall be kept on site and made available to the Division upon request.

2. Units G024 thru G027 & G029 thru G031: Internal Combustion Engines, Diesel Fuel Fired

Seven (7) Emergency Generators

Parameter	Permit Condition Number	Limitations Short Term	Limitations Long Term	Compliance Emission Factor	Monitoring Method	Monitoring Interval
Total Emission Limits from All Units:	2.1.				Recordkeeping and Calculation	Monthly
NO_X		N/A	20.7 tons/yr	See Condition 2.1.		
CO		N/A	7.4 tons/yr			
SO_2	2.2.	**Applies to Each Engine:** 0.8 lbs/MMBtu		N/A	Fuel Restriction	See Condition 2.2.
All Units: Total Diesel Fuel Consumption	2.3.	N/A	70,000 gal/yr	N/A	Calculation	Monthly
Fuel Sampling	2.4.	N/A	N/A	N/A	ASTM Methods	See Condition 2.4.
Hours of Operation	2.5.	N/A	N/A	N/A	Recordkeeping	Monthly
RACT - VOC Emissions	2.6.	RACT is Determined to be Good Combustion Practices and use of Low Sulfur ($\leq$ 0.05 % by weight) Diesel Fuel		N/A	Certification	Annually
RACT - PM_{10} and CO Emissions	2.7	RACT is Determined to be Good Combustion Practices and use of Low Sulfur ($\leq$ 0.05 % by weight) Diesel Fuel		N/A	Certification	Annually
Opacity	2.8	Not to Exceed 20% Except as Provided for Below		N/A	EPA Method 9	Annually
		For Certain Operational Activities – Not to Exceed 30%, for a Period or Periods Aggregating More than Six (6) Minutes in any 60 Consecutive Minutes		N/A		
Units G029 thru G030 Only: NSPS IIII Requirements	2.9	HC – 1.0 g/hp-hr NO_X – 6.9 g/hp-hr CO – 8.5 g/hp-hr PM – 0.4 g/hp-hr		N/A	See Condition 2.9.	
Units G029 thru G030 Only: MACT ZZZZ Requirements	2.10	Compliance with MACT met by complying with NSPS Subpart IIII		N/A	See Condition 2.10.	

2.1 **Total** Nitrogen Oxide (NO_X) and Carbon Monoxide (CO) emissions **from all engines** shall not exceed the above limitations (Colorado Construction Permit 00BO0630, as modified under the provisions of Section I, Condition 1.3). Compliance with the emission limitations shall be monitored by calculating emissions monthly using the emissions factors in the table below.

Unit	NO_X (lb/10^3 gal)	CO (lb/10^3 gal)	Source of Emission Factor
G024	379	55	March 2001 Stack Test on one 1574.8 hp Unit
G025 – G027	730	260	December 1997 Stack Test on one 2340 hp Unit
G029 – G031	278	34	Manufacturer

Monthly emissions, **from each engine**, shall be calculated by the end of the subsequent month, using the above emissions factors in the following equation.

$$\text{tons/mo} = \frac{\text{EF (lbs/}10^3\text{ gal) x fuel consumption (gal/mo)}}{\text{2000 lbs/ton}}$$

Monthly emissions from each engine shall be summed together and a twelve month rolling total of emissions shall be maintained and used to monitor compliance with the annual limitations. Each month a new twelve month total shall be calculated using the previous twelve months data.

2.2 Sulfur Dioxide (SO_2) emissions **from each engine** shall not exceed 0.8 lbs/MMBtu (Colorado Construction Permit 00BO0630 and Colorado Regulation No. 1 Section VI.B.4.b.(i)). In the absence of credible evidence to the contrary, compliance with the SO_2 limitation shall be presumed provided the fuel sampling required by Condition 2.4 demonstrates that the fuel has a sulfur content no greater than 0.05% sulfur and a heat content no less than 49,600 Btu/gal.

2.3 **Total** Consumption of Diesel Fuel **from all engines** shall not exceed the above limitations (Colorado Construction Permit 00BO0630, as modified under the provisions of Section I, Condition 1.3 to increase the annual fuel consumption limit in accordance with the APEN submitted on July 30, 2013). Compliance with the limitations shall be monitored by determining, by the end of the subsequent month, fuel consumption **from each engine**. Fuel consumption from each engine shall be determined by multiplying the maximum hourly fuel consumption rate of the engine (see table below, from Title V Operating Permit Application submitted on 12/21/99 and revised per the Title V Renewal Application submitted on 5/4/07) by the hours the engine was operated in the month.

Engine	**Horsepower**	**Maximum Hourly Fuel Rate**
G024	823 hp	40.4 gal/hr
G025 and G026	2876	139 gal/hr
G027	2498 hp	118.9 gal/hr
G029 – G031	3604 hp	173.3 gal/hr

Monthly fuel consumption from each engine shall be summed together and a twelve month rolling total of fuel consumption shall be maintained and used to monitor compliance with the annual limitation. Each month a new twelve month total shall be calculated using the previous twelve months data.

2.4 Diesel fuel shall be sampled to determine the heat content and weight percent sulfur of the fuel. Each shipment of fuel shall be sampled and analyzed using appropriate ASTM methods or equivalent, if approved in advance by the Division. In lieu of sampling, vendor data may be used to determine the heat content and weight percent sulfur provided sampling and analysis was performed using the appropriate ASTM methods.

2.5 Hours of operation shall be recorded monthly **for each engine** and used to calculate the monthly fuel consumption as required by Condition 2.3.

2.6 **All units** are subject to RACT requirements for VOC emissions (Colorado Construction Permit 00BO0630 and Colorado Regulation No. 7, Section II.C.2). RACT has been determined to be good combustion practices (operation according to manufacturer specifications) and use of low sulfur ($\leq$ 0.05 % by weight) diesel fuel.

2.7 **All units** are subject to RACT requirements for PM_{10} and CO emissions (Colorado Construction Permit 00BO0630 and Colorado Regulation No. 3, Part B, Section III.D.2.d.a). RACT has been determined to be good combustion practices (operation according to manufacturer specifications) and use of low sulfur ($\leq$ 0.05 % by weight) diesel fuel.

2.8 Opacity of emissions **from each engine** shall not exceed the following:

2.8.1 Except as provided for in Condition 2.8.2 below, no owner or operator of a source shall allow or cause the emission into the atmosphere of any air pollutant which is in excess of 20% opacity (Colorado Construction Permit 00BO0630 and Colorado Regulation No. 1, Section II.A.1).

2.8.2 No owner or operator of a source shall allow or cause to be emitted into the atmosphere any air pollutant resulting from the building of a new fire, cleaning of fire boxes, soot blowing, start-up, process modifications, or adjustment or occasional cleaning of control equipment which is in excess of 30% opacity for a period or periods aggregating more than six (6) minutes in any sixty (60) consecutive minutes (Colorado Construction Permit 00BO0630 and Colorado Regulation No. 1, Section II.A.4).

Compliance with these limitations shall be monitored by conducting visual emission observations in accordance with EPA Reference Method 9 as follows:

2.8.3 Compliance with the opacity standard in Condition 2.8.2 shall be monitored by conducting visible emission observations in accordance with EPA Method 9, once per year **on each engine**. This opacity observation shall be taken within one (1) hour of

the commencement of any of the specific activities identified in Condition 2.8.2 and every 24 hours thereafter until that activity is completed.

2.8.4 An opacity observation shall be conducted annually (calendar year period) **on each engine** to monitor compliance with the opacity limit in Condition 2.8.1. Annual opacity observations for each engine shall be separated by a period of four (4) months.

If an engine is operated more than 250 hours in any calendar year period, a second opacity observation shall be conducted for that engine. If two opacity readings are conducted in the annual (calendar year) period for an engine, such readings shall be conducted at least thirty days apart.

2.8.5 If an engine is not operated during the annual (calendar year) period, then no opacity observations (specified in Conditions 2.8.3 and 2.8.4) are required for that engine.

2.8.6 Subject to the provisions of C.R.S. 25-7-123.1 and in the absence of credible evidence to the contrary, exceedance of the opacity limit shall be considered to exist from the time a Method 9 reading is taken that shows an exceedance of the opacity limit until a Method 9 reading is taken that shows the opacity is less than the opacity limit.

2.8.7 All opacity observations shall be performed by an observer with current and valid Method 9 certification. Results of Method 9 readings and a copy of the certified Method 9 reader's certificate shall be kept on site and made available to the Division upon request.

2.9 **Units G029 thru G031** are subject to the requirements in 40 CF Part 60 Subpart IIII, "Standards of Performance for Stationary Compression Ignition Internal Combustion Engines", as adopted by reference in Colorado Regulation No. 6, Part A. The specific applicable requirements are included in Section II, Condition 5 of this permit.

2.10 **Units G029 thru G031** are subject to the requirements in 40 CF Part 63 Subpart ZZZZ, "National Emissions Standards for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines." The specific applicable requirements are as follows:

Note that as of the date of revised permit issuance [October 7, 2013], the requirements in 40 CFR Part 63 Subpart ZZZZ promulgated after July 1, 2007 have not been adopted into Colorado Regulation No. 8, Part E by the Division and are therefore not state-enforceable. In the event that the Division adopts these requirements they will be state-enforceable.

A new or reconstructed stationary RICE located at an area source must meet the requirements of this part by meeting the requirements of 40 CFR part 60 subpart IIII, for compression ignition engines. No further requirements apply for such engines under this part. (63.6590(c) and (c)(1)).

3. Units B001, B003 & B004: Three (3) Boilers, Natural Gas Fired, With Diesel and/or Jet Fuel as Backup.

Boiler 1 Rated at 60 MMBtu/hr, Boiler 3 Rated at 66 MMBtu/hr and Boiler 4 Rated at 54.4 MMBtu/hr

Parameter	Permit Condition Number	Limitations Short Term	Limitations Long Term	Compliance Emission Factor	Monitoring Method	Monitoring Interval
Total Emission Limits from All Units:	3.1.				Recordkeeping and Calculation	Monthly
PM		N/A	3.1 tons/yr	See Condition 3.1.		
PM_{10}			3.1 tons/yr			
NO_X			50.6 tons/yr			
CO			40.3 tons/yr			
VOC			2 tons/yr			
All Units: Total Fuel Consumption	3.2.	N/A	Natural Gas: 700 MMscf/yr Fuel Oil: 400,000 gal/yr	N/A	Fuel Meters	Monthly
Particulate Matter	3.3.	**Natural Gas:** **Boiler 1:** 0.172 lbs/MMBtu **Boiler 3:** 0.168 lbs/MMBtu **Boiler 4:** 0.177 lbs/MMBtu **Fuel Oil:** **Boiler 1:** 0.176 lbs/MMBtu **Boiler 3:** 0.174 lbs/MMBtu **Boiler 4:** 0.179 lbs/MMBtu		N/A	Fuel Restriction	See Condition 3.3.
Sulfur Content of Fuel Oil	3.4.	Sulfur Content Shall Not Exceed 0.05 % by Weight		N/A	ASTM Analysis	Each Shipment of Fuel Oil
NSPS General Provisions – **Boiler 4 Only**	3.5.	N/A	N/A	N/A	As Required by NSPS General Provisions	Subject to NSPS General Provisions
Opacity	3.6	**State-Only** Not to Exceed 20%– **Applies to Boiler 4 Only**		N/A	See Condition 3.6.	
		Not to Exceed 20%, Except as Provided for Below				
		For Certain Operational Activities – Not to Exceed 30% for a Period or Periods Aggregating More than Six (6) Minutes in Any 60 Consecutive Minutes				

Parameter	Permit Condition Number	Limitations Short Term	Limitations Long Term	Compliance Emission Factor	Monitoring Method	Monitoring Interval
NSPS Dc Opacity – **Applies to Boiler 4 Only When Burning Diesel and/or Jet Fuel**	3.7	Not to Exceed 20% Except for one Six (6) Minute Average Not to Exceed 27% Per Hour		N/A	EPA Method 9	See Condition 3.7
Boiler Operating Restrictions	3.8	The boiler Shall be Operated at a Minimum Load of 20%		N/A	Certification	Annually
Fuel Oil Restrictions for MACT JJJJJJ Applicability	3.9	Fuel oil can only be burned during periods of gas curtailment, gas supply emergencies, or periodic testing. Periodic testing is limited to 48 hours per calendar year.		N/A	Recordkeeping	Annually

3.1 **Total** Emissions of PM, PM_{10}, VOC, NO_X and CO **from all boilers** shall not exceed the above limitations (Colorado Construction Permit 94BO366, as modified under the provisions of Section I, Condition 1.3). Compliance with annual emission limitations shall be monitored by calculating emissions monthly using the emission factors identified in the table below:

Boiler 1 & 3:

Pollutant	Natural Gas		Fuel Oil	
	lbs/MMscf	Source	lbs/10^3 gal	Source
PM	1.9	AP-42, Section 1.4 (dated 3/98)	2	AP-42, Section 1.4 (dated 3/98)
PM_{10}	1.9		1	
NO_X	114	April 2001 Stack Test	16.5	April 2001 Stack Test
CO	30.3		3.4	
VOC	5.5	AP-42, Section 1.4 (dated 3/98)	0.2	AP-42, Section 1.4 (dated 3/98)

Boiler 4:

Pollutant	Natural Gas		Fuel Oil	
	lbs/MMscf	Source	lbs/10^3 gal	Source
PM	7.35	Manufacturer's Emission Factors	6.85	Manufacturer's Emission Factors
PM_{10}	7.35		6.85	
NO_X	37.8		53.4	
CO	157.5		21.2	
VOC	5.5	AP-42, Section 1.4 (dated 3/98)	0.2	AP-42, Section 1.4 (dated 3/98)

Monthly emissions, **from each boiler**, shall be calculated by the end of the subsequent month, using the above emission factors in the following equation:

$$\text{tons/mo} = \frac{\text{EF (lbs/MMscf or lbs/}10^3\text{ gal) x monthly fuel consumption (MMscf/mo or gal/mo)}}{\text{2000 lbs/ton}}$$

Monthly emissions from each boiler shall be summed together and a rolling twelve month total of emissions shall be used to monitor compliance with the annual limitations. Each month a new twelve month total shall be calculated using the previous twelve months data.

3.2 **Total** Consumption of Fuel **from all boilers** shall not exceed the following limitations:

3.2.1 Consumption of natural gas shall not exceed 700 MMscf/yr (Colorado Construction Permit 94BO366).

3.2.2 Consumption of diesel and/or jet fuel shall not exceed 400,000 gal/yr (Colorado Construction Permit 94BO366).

Compliance with the fuel consumption limits shall be monitored by determining, by the end of the subsequent month, fuel consumption **from each boiler**. Fuel consumption shall be determined using fuel meters, hours of operation and any other records as necessary. Monthly fuel consumption from each boiler shall be summed together and a rolling twelve month total of the fuel consumption shall be used to monitor compliance with the annual fuel consumption limits. A separate total shall be maintained for natural gas and fuel oil. Each month a new twelve month total shall be calculated using the previous twelve months data.

3.3 Particulate Matter emissions **from each boiler** shall not exceed the above limitations (Colorado Regulation No. 1, Section III.A.1.b). Compliance with the particulate matter emission limit is presumed, in the absence of credible evidence to the contrary, since only natural gas and/or low sulfur ($\leq$ 0.05% by weight) diesel and/or jet fuel is permitted to be used as fuel.

Note that the numeric PM standards were determined using the design heat input for the boilers (Natural Gas: Boiler 1 – 60 MMBtu/hr, Boiler 3 – 66 MMBtu/hr and Boiler 4 – 54.4 MMBtu/hr. Fuel Oil: Boiler 1 – 55 MMBtu/hr, Boiler 3 – 58 MMBtu/hr and Boiler 4 – 52.3 MMBtu/hr) in the following equation:

$PE = 0.5 \times (FI)^{-0.26,}$ where: PE = particulate standard in lbs/MMBtu
FI = fuel input in MMBtu/hr

3.4 The Fuel Oil shall have a Sulfur Content not to exceed 0.05% by weight (Colorado Construction Permit 94BO366). Compliance with this requirement shall be monitored by sampling fuel oil to determine the heat content and weight percent sulfur of the fuel. Each shipment of fuel oil shall be sampled and analyzed using appropriate ASTM methods or equivalent, if approved in advance by the Division. In lieu of sampling, vendor data may be used to determine the heat content and weight percent sulfur provided sampling and analysis was performed using appropriate ASTM methods.

3.5 **Boiler 4 Only** is subject to the requirements in 40 CFR Part 60, Subpart A – General Provisions, as adopted by reference in Colorado Regulation No. 6, Part A. Specifically, boiler 4 is subject to the requirements identified in Condition 6.

3.6 The boilers are subject to the following opacity requirements:

3.6.1 **State-Only Requirement:** No owner or operator may discharge, or cause the discharge into the atmosphere of any particulate matter which is greater than 20% opacity (Colorado Construction Permit 94BO366 and Colorado Regulation No. 6, Part B, Section II.C.3). This opacity standard applies to **boiler 4 only.**

This opacity standard applies at all times except during periods of startup, shutdown and malfunction (40 CFR Part 60 Subpart A § 60.11(c), as adopted by reference in Colorado Regulation No. 6, Part B, Section I.A).

Note that this opacity requirement is more stringent than the opacity requirement in Condition 3.6.4 during periods of building of a new fire, cleaning of fire boxes, soot blowing, process modifications and adjustment or occasional cleaning of control equipment.

3.6.2 Except as provided for in Condition 3.6.3 below, no owner or operator of a source shall allow or cause the emission into the atmosphere of any air pollutant which is in excess of 20% opacity (Colorado Construction Permit 94BO366 and Colorado Regulation No. 1, Section II.A.1). This opacity standard applies to **each boiler**.

3.6.3 No owner or operator of a source shall allow or cause to be emitted into the atmosphere any air pollutant resulting from the building of a new fire, cleaning of fire boxes, soot blowing, start-up, process modifications, or adjustment or occasional cleaning of control equipment which is in excess of 30% opacity for a period or periods aggregating more than six (6) minutes in any sixty (60) consecutive minutes (Colorado Construction Permit 94BO366 and Colorado Regulation No. 1, Section II.A.4). This opacity standard applies to **each boiler.**

Compliance with the opacity requirements shall be monitored as follows:

3.6.4 **When Burning Natural Gas as Fuel:** In the absence of credible evidence to the contrary, each boiler shall be presumed to be in compliance with the above opacity requirements whenever natural gas is used as fuel.

3.6.5 **When Burning Diesel and/or Jet Fuel** compliance with the opacity requirements shall be monitored as follows:

3.6.5.1 Compliance with the opacity standard in Condition 3.6.3 shall be monitored by conducting visible emission observations in accordance with EPA Method 9, once per year **on each boiler**. This opacity observation shall be taken within one (1) hour of the commencement of any of the

specific activities identified in Condition 3.6.3 and every 24 hours thereafter until that activity is completed.

A visible emissions observation is not required for any annual period for a boiler where no diesel and/or jet fuel has been burned in that boiler. In addition, a visible emission observation is not required for a boiler for any annual period where no specific activities identified in Condition 3.6.3 have occurred when diesel and/or jet fuel has been burned as fuel in that boiler.

3.6.5.2 Compliance with the opacity standard in Condition 3.6.2 shall be monitored by conducting visible emission observations in accordance with EPA Method 9 annually **on each boiler**. Such opacity observations shall be conducted within 24 hours of completion of any specific activity identified in Condition 3.6.3.

A visible emissions observation is not required for any annual period for a boiler where no diesel and/or jet fuel has been burned in that boiler.

3.6.5.3 Compliance with the opacity standard in Condition 3.6.1 is presumed, in the absence of credible evidence to the contrary, provided the visible emission observation **for boiler 4** conducted under the provisions of Condition 3.6.5.2 meets the limitations in Condition 3.6.1.

3.6.5.4 Subject to the provisions of C.R.S. 25-7-123.1 and in the absence of credible evidence to the contrary, exceedance of the opacity limit shall be considered to exist from the time a Method 9 reading is taken that shows an exceedance of the opacity limit until a Method 9 reading is taken that shows the opacity is less than the opacity limit.

3.6.5.5 All opacity observations shall be performed by an observer with current and valid Method 9 certification. Results of Method 9 readings and a copy of the certified Method 9 reader's certification shall be made available to the Division upon request.

3.7 No owner or operator of a source shall cause to be discharged into the atmosphere from any affected facility any gases which exhibit greater than 20 percent opacity (6-minute average), except for one 6-minute period per hour of not more than 27 percent opacity (40 CFR Part 60 Subpart Dc § 60.43c(c), as adopted by reference in Colorado Regulation No. 6, Part A and Colorado Construction Permit 94BO366). This opacity standard applies to **boiler 4 only when burning diesel and/or jet fuel.**

The opacity standard applies at all times, except during periods of startup, shutdown, or malfunction (40 CFR Part 60 Subpart Dc § 60.43c(d), as adopted by reference in Colorado Regulation No. 6, Part A and Colorado Construction Permit 94BO366).

Note that this opacity requirement is more stringent than the opacity requirement in Condition 3.6.3 during periods of building of a new fire, cleaning of fire boxes, soot blowing, process modifications and adjustment or occasional cleaning of control equipment.

Compliance with the opacity requirements shall be monitored as follows:

3.7.1 The owner or operator of an affected facility subject to an opacity standard in §60.43c(c) that is not required to use a COMS due to §60.47c(c), (d), (e) or (f) that elects not to use a COMS shall conduct a performance test using Method 9 of appendix A–4 of this part and the procedures in §60.11 to demonstrate compliance with the applicable limit in §60.43c by April 29, 2011, within 45 days of stopping use of an existing COMS, or within 180 days after initial startup of the facility, whichever is later, and shall comply with Conditions 3.7.1.1 through 3.7.1.3. The observation period for Method 9 of appendix A–4 of this part performance tests may be reduced from 3 hours to 60 minutes if all 6-minute averages are less than 10 percent and all individual 15-second observations are less than or equal to 20 percent during the initial 60 minutes of observation. (60.47c(a))

Note that since boiler No. 4 did not burn diesel and/or jet fuel in 2011, the performance test shall be conducted within 60 days of firing diesel and/or jet fuel in this unit.

3.7.1.1 Except as provided in Conditions 3.7.1.2 and 3.7.1.3, the owner or operator shall conduct subsequent Method 9 of appendix A–4 of this part performance tests using the procedures in Condition 3.7.1 according to the applicable schedule in Conditions 3.7.1.1.a through 3.7.1.1.d, as determined by the most recent Method 9 of appendix A–4 of this part performance test results. (60.48c(a)(1))

a. If no visible emissions are observed, a subsequent Method 9 of appendix A–4 of this part performance test must be completed within 12 calendar months from the date that the most recent performance test was conducted or within 45 days of the next day that fuel with an opacity standard is combusted, whichever is later (60.47c(a)(1)(i));

b. If visible emissions are observed but the maximum 6-minute average opacity is less than or equal to 5 percent, a subsequent Method 9 of appendix A–4 of this part performance test must be completed within 6 calendar months from the date that the most recent performance test was conducted or within 45 days of the next day that fuel with an opacity standard is combusted, whichever is later (60.47c(a)(1)(ii));

c. If the maximum 6-minute average opacity is greater than 5 percent but less than or equal to 10 percent, a subsequent Method 9 of appendix A–4 of this part performance test must be completed within 3 calendar months from the date that the most recent performance test was conducted or within 45 days of the next day that fuel with an opacity standard is combusted, whichever is later (60.47c(a)(1)(iii)); or

d. If the maximum 6-minute average opacity is greater than 10 percent, a subsequent Method 9 of appendix A–4 of this part performance test

must be completed within 45 calendar days from the date that the most recent performance test was conducted. (60.47c(a)(1)(iv))

3.7.1.2 If the maximum 6-minute opacity is less than 10 percent during the most recent Method 9 of appendix A–4 of this part performance test, the owner or operator may conduct Method 22 observations in accordance with § 60.47c(a)(2).

3.7.1.3 If the maximum 6-minute opacity is less than 10 percent during the most recent Method 9 of appendix A–4 of this part performance test, the owner or operator may monitor opacity using a digital opacity compliance system in accordance with § 60.47c(a)(3).

3.7.2 The owner or operator of each affected facility subject to the SO_2emission limits of §60.42c, or the PM or opacity limits of §60.43c, shall submit to the Division the performance test data from the initial and any subsequent performance tests and, if applicable, the performance evaluation of the CEMS and/or COMS using the applicable performance specifications in appendix B of this part. (§ 60.48c(b)

Boiler 4 is not subject to a PM emission limitations and the SO_2 emission limitations are included in the permit shield for streamlined conditions (Section III.3), therefore, this requirement applies only with respect to the opacity requirements in Condition 3.7.

3.7.3 In addition to the applicable requirements in §60.7, the owner or operator of an affected facility subject to the opacity limits in §60.43c(c) (Condition 3.7) shall submit excess emission reports for any excess emissions from the affected facility that occur during the reporting period [semi-annual monitoring period] and maintain records according to the requirements specified in § 60.48c(c)(1) through (3), as applicable to the visible emissions monitoring method used. (§ 60.48c(c))

3.8 The boilers shall be operated at a minimum load of 20%, except during such periods as startup and shutdown and limited periods when the boilers are kept warm (but not carrying load) in order to enable a "hot startup".

3.9 In accordance with the requirements in 40 CFR Part 63 Subpart JJJJJJ § 63.11195(e), gas-fired boilers are not subject to the provisions in 40 CFR Part 63 Subpart JJJJJJ. A gas-fired boiler is defined in 40 CFR Part 63 Subpart JJJJJJ § 63.11237as "any boiler that burns gaseous fuels not combined with solid fuels, burns liquid fuel only during periods of gas curtailment, gas supply emergencies, or periodic testing on liquid fuel. Periodic testing of liquid fuel shall not exceed a combined total of 48 hours during any calendar year." The permittee shall retain records for each boiler documenting the reason for burning fuel oil and the hours that fuel oil is burned. In the event that fuel oil is burned in any boiler for reasons other than natural gas curtailment, gas supply emergency or periodic testing or if periodic testing exceeds 48 hours during a calendar year, the provision in 40 CFR Part 63 Subpart JJJJJJ apply to that boiler. Within 60 days of triggering the requirements in 40 CFR Part 63 Subpart JJJJJJ, the permittee shall submit an application to revise this permit to include the appropriate requirements.

4. Units C001, C002 and C003: Cooling Towers

Parameter	Permit Condition Number	Limitations		Compliance Emission Factor	Monitoring	
		Short Term	Long Term		Method	Interval
Total Dissolved Solids Analysis	4.1.	N/A	N/A	N/A	Laboratory Analysis	Annually
Opacity	4.2.	Not to Exceed 20%		N/A	See Condition 4.2.	
Emission Calculations	4.3.	N/A	N/A	See Condition 4.3	Recordkeeping and Calculation	Annually
Hours of Operation	4.4.	N/A	N/A	N/A	Recordkeeping	Annually

Note that Bldg 011 CWT has PM, PM_{10} and HAP emissions above APEN de minimis. Bldg 011W and 003 CWTs have HAP emissions above APEN de minimis levels.

4.1 Samples of water circulated through each cooling tower shall be taken upstream of the cooling tower and analyzed annually to determine the total dissolved solids. The total dissolved solids concentration shall be used to calculate particulate matter emissions as required by Condition 4.3. A copy of the procedures used to obtain and analyze samples shall be maintained and made available to the Division upon request.

4.2 Opacity of emissions, **from each tower**, shall not exceed 20% opacity (Colorado Regulation No. 1, Section II.A.1). In the absence of credible evidence to the contrary, compliance with the opacity standard shall be presumed, provided the drift eliminators on the towers are maintained and operated in accordance with manufacturers' requirements and good engineering practices.

4.3 Emissions of PM, PM_{10} and chloroform from each cooling tower shall be calculated annually, for purposes of APEN reporting and payment of annual fees, using the following equations:

$$PM = PM_{10}\ (\text{tons/yr}) = \frac{Q \times d \times \%\ \text{drift} \times 31.3\%\ \text{drift dispersed} \times \text{total solids concentration}}{2000\ \text{lbs/ton}}$$

$$CHCl_3\ (\text{tons/yr}) = \frac{Q \times (3.785\ \text{l/gal}) \times (2.3\ \text{kg}\ CHCl_3/10^9\ \text{liter}) \times 2.205\ \text{lb/kg}}{2000\ \text{lbs/ton}}$$

Where:
Q = water circulated, gal/yr
d = density of water, lbs/gal (from T5 application d = 8.34 lbs/gal)
% drift = 0.005% (from T5 application)
31.3% drift dispersed (from EPA-600/7-79-251a, November 1979, AEffects of Pathogenic and Toxic Materials Transported Via Cooling Device Drift - Volume1 - Technical Report@, Page 63)
Total solids concentration = total solids concentration, in ppm (lbs solids/10^6 lbs water) - to be determined by Condition 4.2.
2.3 kb/10^9 liter (from "Locating and Estimating Air Emissions from Sources of Chloroform", EPA-450/4-84-007c, March 1984, for recirculating units)

4.4 For the each cooling tower, hours of operation shall be recorded annually. Hours of operation shall be used to determine the annual quantity of water circulated through the unit by multiplying the hours of operation by the maximum hourly design circulation rate of the unit (B011 - 1.794 mmgal/hr, B011W – 1.08 mmgal/hr and B003 – 1.05 mmgal/hr). The annual quantity of water circulated through each unit will be used to calculate emissions as specified in Condition 4.4.

5. Standards of Performance for Stationary Compression Ignition Internal Combustion Engines (40 CFR Part 60 Subpart IIII)

Units G029 through G041 are subject to the requirements in 40 CFR Part 60 Subpart IIII, "Standards of Performance for Stationary Compression Ignition Internal Combustion Engines", as adopted by reference in Colorado Regulation No. 6, Part A, including but not limited to the following requirements:

The requirements below reflect the rule language in 40 CFR Part 60 Subpart IIII as of the latest revisions to 40 CFR Part 60 Subpart IIII published in the Federal Register on January 30, 2013. However, if revisions to this Subpart are promulgated at a later date, the owner or operator is subject to the requirements contained in the revised version of 40 CFR Part 60 Subpart IIII.

What emission standards must I meet for emergency engines if I am an owner or operator of a stationary CI internal combustion engine? (§ 60.4205)

5.1 Owners and operators of 2007 model year and later emergency stationary CI ICE with a displacement of less than 30 liters per cylinder that are not fire pump engines must comply with the emission standards for new nonroad CI engines in §60.4202, for all pollutants, for the same model year and maximum engine power for their 2007 model year and later emergency stationary CI ICE. (§ 60.4205(b))

G038 – G040: Stationary CI internal combustion engine manufacturers must certify their 2007 model year and later emergency stationary CI ICE with a maximum engine power less than or equal to 2,237 KW (3,000 HP) and a displacement of less than 10 liters per cylinder that are not fire pump engines to the emission standards specified in paragraphs (a)(1) through (2) of this section. (§ 60.4202(a))

For engines with a maximum engine power greater than or equal to 37 KW (50 HP), the certification emission standards for new nonroad CI engines for the same model year and maximum engine power in 40 CFR 89.112 and 40 CFR 89.113 for all pollutants beginning in model year 2007. (§ 60.4202(a)(2))

The specific emission limitations in 40 CFR 89.112 that apply to engines **G038 – G040** are as follows:

Tier II requirements for Model Engines Greater than 560 kW					
Emission Standards (g/kW-hr)			Emission Standards (g/hp-hr)		
NMHC + NOX	CO	PM	NMHC + NOX	CO	PM
6.4	3.5	0.2	4.77	2.61	0.15

G029 – G037 & G041: Stationary CI internal combustion engine manufacturers must certify their 2007 model year and later emergency stationary CI ICE with a maximum engine power greater than 2,237 KW (3,000 HP) and a displacement of less than 10 liters per cylinder that are not fire pump engines to the emission standards specified in paragraphs (b)(1) through (2) of this section. (§ 60.4202(b))

For 2007 through 2010 model years, the emission standards in table 1 to this subpart, for all pollutants, for the same maximum engine power. (§ 60.4202(b)(1))

The specific emission limitations in table 1 that apply to engines **G029 – G037 & G041** are as follows:

Requirements for Model Engines Greater than 560 kW (750 hp)							
Emission Standards (g/kW-hr)				Emission Standards (g/hp-hr)			
HC	CO	NO_X	PM	HC	CO	NO_X	PM
1.3	11.4	9.2	0.54	1.0	8.5	6.9	0.4

How long must I meet the emission standards if I am an owner or operator of a stationary CI internal combustion engine? (§ 60.4206)

5.2 Owners and operators of stationary CI ICE must operate and maintain stationary CI ICE that achieve the emission standards as required in §§60.4204 and 60.4205 over the entire life of the engine. (§ 60.4206)

What fuel requirements must I meet if I am an owner or operator of a stationary CI internal combustion engine subject to this subpart? (§ 60.4207)

5.3 Beginning October 1, 2010, owners and operators of stationary CI ICE subject to this subpart with a displacement of less than 30 liters per cylinder that use diesel fuel must use diesel fuel that meets the requirements of 40 CFR 80.510(b) for nonroad diesel fuel, except that any existing diesel fuel purchased (or otherwise obtained) prior to October 1, 2010, may be used until depleted. ((§ 60.4207(a))

The fuel limitations in 80.510(b) are: sulfur content of 15 ppm maximum for NR diesel fuel and 500 ppm maximum for LM diesel fuel and a minimum cetane index of 40 or a maximum aromatic content of 35 volume percent.

Compliance with the fuel limitations shall be monitored by sampling and analyzing each shipment of diesel fuel to determine the sulfur and cetane and/or aromatic content using appropriate ASTM methods, or equivalent if approved in advance by the Division. In lieu of sampling, vendor data may be used to determine the sulfur and cetane and/or aromatic content, provided that the sampling and analysis was performed using the appropriate ASTM methods.

What are the monitoring requirements if I am an owner or operator of a stationary CI internal combustion engine? (§ 60.4209)

If you are an owner or operator, you must meet the monitoring requirements of this section. In addition, you must also meet the monitoring requirements specified in §60.4211.

5.4 If you are an owner or operator of an emergency stationary CI internal combustion engine that does not meet the standards applicable to non-emergency engines, you must install a non-resettable hour meter prior to startup of the engine. (§ 60.4209(a))

5.5 If you are an owner or operator of a stationary CI internal combustion engine equipped with a diesel particulate filter to comply with the emission standards in §60.4204, the diesel particulate filter must be installed with a backpressure monitor that notifies the owner or operator when the high backpressure limit of the engine is approached. (§ 60.4209(b))

What are my compliance requirements if I am an owner or operator of a stationary CI internal combustion engine? (§ 60.4211)

5.6 If you are an owner or operator and must comply with the emission standards specified in this subpart, you must do all of the following, except as permitted under § 60.4211(g) (Condition 5.1.9):

5.6.1 Operate and maintain the stationary CI internal combustion engine and control device according to the manufacturer's emission-related written instructions;

5.6.2 Change only those emission-related settings that are permitted by the manufacturer; and

5.6.3 Meet the requirements of 40 CFR parts 89, 94 and/or 1068, as they apply to you. (§ 60.4211(a)(1) – (3))

5.7 If you are an owner or operator of a 2007 model year and later stationary CI internal combustion engine and must comply with the emission standards specified in §60.4204(b) or §60.4205(b), or if you are an owner or operator of a CI fire pump engine that is manufactured during or after the model year that applies to your fire pump engine power rating in table 3 to this subpart and must comply with the emission standards specified in §60.4205(c), you must comply by purchasing an engine certified to the emission standards in §60.4204(b), or §60.4205(b) or (c), as applicable, for the same model year and maximum (or in the case of fire pumps, NFPA nameplate) engine power. The engine must be installed and configured according to the manufacturer's emission-related specifications, except as permitted in § 60.4211(g) (Condition 5.9). (§ 60.4211(c))

Engines G029 through G041 are certified to meet the requirements of EPA Tier 2 for Standby Emergency Generators.

5.8 If you own or operate an emergency stationary ICE, you must operate the emergency stationary ICE according to the requirements in 60.4211(f)(1) through (3). In order for the engine to be considered an emergency stationary ICE under this subpart, any operation other than emergency operation, maintenance and testing, emergency demand response, and operation in non-emergency situations for 50 hours per year, as described in 60.4211(f)(1) through (3), is

prohibited. If you do not operate the engine according to the requirements in 60.4211(f)(1) through (3), the engine will not be considered an emergency engine under this subpart and must meet all requirements for non-emergency engines. (§ 60.4211(f))

5.8.1 There is no time limit on the use of emergency stationary ICE in emergency situations. (60.4211(f)(1))

5.8.2 You may operate your emergency stationary ICE for any combination of the purposes specified in 60.4211(f)(2)(i) through (iii) for a maximum of 100 hours per calendar year. Any operation for non-emergency situations as allowed by 60.4211(f)(3) counts as part of the 100 hours per calendar year allowed by this paragraph (f)(2). (60.4211(f)(2))

5.8.2.1 Emergency stationary ICE may be operated for maintenance checks and readiness testing, provided that the tests are recommended by federal, state or local government, the manufacturer, the vendor, the regional transmission organization or equivalent balancing authority and transmission operator, or the insurance company associated with the engine. The owner or operator may petition the Administrator for approval of additional hours to be used for maintenance checks and readiness testing, but a petition is not required if the owner or operator maintains records indicating that federal, state, or local standards require maintenance and testing of emergency ICE beyond 100 hours per calendar year. (60.4211(f)(2)(i))

5.8.2.2 Emergency stationary ICE may be operated for maintenance checks and readiness testing, provided that the tests are recommended by federal, state or local government, the manufacturer, the vendor, the regional transmission organization or equivalent balancing authority and transmission operator, or the insurance company associated with the engine. The owner or operator may petition the Administrator for approval of additional hours to be used for maintenance checks and readiness testing, but a petition is not required if the owner or operator maintains records indicating that federal, state, or local standards require maintenance and testing of emergency ICE beyond 100 hours per calendar year. (60.4211(f)(2)(ii))

5.8.2.3 Emergency stationary ICE may be operated for periods where there is a deviation of voltage or frequency of 5 percent or greater below standard voltage or frequency. (60.4211(f)(2)(iii))

5.8.3 Emergency stationary ICE may be operated for up to 50 hours per calendar year in non-emergency situations. The 50 hours of operation in non-emergency situations are counted as part of the 100 hours per calendar year for maintenance and testing and emergency demand response provided in 60.4211(f)(2) (Condition 5.8.2). Except as provided in 60.4211(f)(3)(i), the 50 hours per calendar year for non-emergency situations cannot be used for peak shaving or non-emergency demand response, or to

generate income for a facility to an electric grid or otherwise supply power as part of a financial arrangement with another entity. (60.4211(f)(3))

5.8.3.1 The 50 hours per year for non-emergency situations can be used to supply power as part of a financial arrangement with another entity if all of the requirements in 60.4211(f)(3)(i)(A) through (E) are met. (60.4211(f)(3)(i))

5.9 If you do not install, configure, operate, and maintain your engine and control device according to the manufacturer's emission-related written instructions, or you change emission-related settings in a way that is not permitted by the manufacturer, you must demonstrate compliance as specified in § 60.4211(g)(1) through (3), as applicable. (§ 60.4211(g))

What are my notification, reporting, and recordkeeping requirements if I am an owner or operator of a stationary CI internal combustion engine? (§ 60.4214)

5.10 If the stationary CI internal combustion engine is an emergency stationary internal combustion engine, the owner or operator is not required to submit an initial notification. Starting with the model years in table 5 to this subpart, if the emergency engine does not meet the standards applicable to non-emergency engines in the applicable model year, the owner or operator must keep records of the operation of the engine in emergency and non-emergency service that are recorded through the non-resettable hour meter. The owner must record the time of operation of the engine and the reason the engine was in operation during that time. (§ 60.4214(b))

5.11 If the stationary CI internal combustion engine is equipped with a diesel particulate filter, the owner or operator must keep records of any corrective action taken after the backpressure monitor has notified the owner or operator that the high backpressure limit of the engine is approached. (§ 60.4214(c))

5.12 If you own or operate an emergency stationary CI ICE with a maximum engine power more than 100 HP that operates or is contractually obligated to be available for more than 15 hours per calendar year for the purposes specified in § 60.4211(f)(2)(ii) and (iii) or that operates for the purposes specified in § 60.4211(f)(3)(i), you must submit an annual report according to the requirements in 60.4214(d)(1) through (3). (60.4211(d))

What parts of the general provisions apply to me? (§ 60.4218)

5.13 Table 8 of this subpart shows which parts of the General Provisions in §§ 60.1 through 60.19 apply to you. (§ 60.4218)

Note that the relevant general provisions are included in Section II, Condition 6.1 of this permit.

6. NSPS General Provisions

These requirements apply to those sources which are subject to 40 CFR Part 60 requirements. Those sources (engines G029 through G041, boilers B002 and B004) are referred to this condition throughout the permit.

6.1 No article, machine, equipment or process shall be used to conceal an emission which would otherwise constitute a violation of an applicable standard. Such concealment includes, but is not limited to, the use of gaseous diluents to achieve compliance with an opacity standard or with a standard which is based on the concentration of a pollutant in the gasses discharged to the atmosphere. (40 CFR 60 Subpart A § 60.12, as adopted by reference in Colorado Regulation No. 6, Part A).

6.2 At all times, including periods of startup, shutdown, and malfunction, owners and operators shall to the extent practicable, maintain and operate any affected facility including associated air pollution control equipment in a manner consistent with good air pollution control practice for minimizing emissions. Determination of whether acceptable operating and maintenance procedures are being used will be based on information available to the Division which may include, but is not limited to monitoring results, opacity observations, review of operating and maintenance procedures, and inspection of the source (40 CFR Subpart A § 60.11(d), as adopted by reference in Colorado Regulation No. 6, Part A).

6.3 Records shall be maintained of the occurrence and duration of any startup, shutdown, or malfunction in the operation of the source; any malfunction of the air pollution control equipment; or any periods during which a continuous monitoring system or monitoring device is inoperative (40 CFR Part 60 Subpart A § 60.7(b), as adopted by reference in Colorado Regulation No. 6, Part A).

7. Unit G041 – Diesel Fired Emergency Generator

Parameter	Permit Condition Number	Limitations Short Term	Limitations Long Term	Compliance Emission Factor	Monitoring Method	Monitoring Interval
NO_X	7.1	N/A	3.0 tons/yr	281.8 lbs/10^3 gal	Recordkeeping and Calculation	Monthly
SO_2	7.2	0.8 lbs/MMBtu		N/A	Fuel Restriction	See Condition 7.2.
Diesel Fuel Consumption	7.3	N/A	21,320 gal/yr	N/A	Calculation	Monthly
Hours of Operation	7.4	N/A	N/A	N/A	Recordkeeping	Monthly
RACT - VOC Emissions	7.5	Compliance with the NSPS Subpart IIII Requirements is Determined to be RACT		N/A	Certification	Annually
RACT – NO_X, PM_{10} and CO Emissions	7.6	Compliance with the NSPS Subpart IIII Requirements is Determined to be RACT		N/A	Certification	Annually
Opacity	7.7	Not to Exceed 20% Except as Provided for Below		N/A	EPA Method 9	Annually
		For Certain Operational Activities – Not to Exceed 30%, for a Period or Periods Aggregating More than Six (6) Minutes in any 60 Consecutive Minutes				
NSPS IIII Requirements	7.8	HC – 1.0 g/hp-hr NO_X – 6.9 g/hp-hr CO – 8.5 g/hp-hr PM – 0.4 g/hp-hr		N/A	See Condition 7.9.	
MACT ZZZZ Requirements	7.9	Compliance with MACT met by complying with NSPS Subpart IIII		N/A	See Condition 7.9.	

7.1 Nitrogen Oxide (NO_X) emissions from this engine shall not exceed the above limitations (In accordance with the provisions in Section I, Condition 1.3 and Colorado Regulation No. 3, Part B, Section II.A.6 and Part C, Section X, based on requested emissions indicated on the APEN submitted October 6, 2010). Compliance with the emission limitations shall be monitored by calculating emissions monthly using the emission factors listed above (from manufacturer, converted to lb/gal by dividing manufacturer's lbs/hr rate by 213.2 gal).

Monthly emissions shall be calculated by the end of the subsequent month, using the above emissions factors and the monthly diesel fuel consumption (as required by Condition 7.3) in the following equation.

$$\text{tons/mo} = EF \frac{(\text{lbs}/10^3 \text{ gal}) \times \text{diesel fuel consumption (gal/mo)}}{2000 \text{ lbs/ton}}$$

Monthly emissions shall be used in a twelve month rolling total to monitor compliance with the annual limitations. Each month a new twelve month total shall be calculated using the previous twelve months data.

7.2 Sulfur Dioxide (SO_2) emissions from this engine shall not exceed 0.8 lbs/MMBtu (Colorado Regulation No. 1 Section VI.B.4.b.(i)). In the absence of credible evidence to the contrary, compliance with the SO_2 limitation shall be presumed provided that the diesel fuel used as fuel meets the sulfur limitation in Condition 5.1.4 of this permit.

7.3 Consumption of Diesel Fuel shall not exceed the above limitation (In accordance with the provisions in Section I, Condition 1.3 and Colorado Regulation No. 3, Part B, Section II.A.6 and Part C, Section X, based on requested fuel consumption indicated on the APEN submitted October 6, 2010). Compliance with the limitations shall be monitored by determining, by the end of the subsequent month, fuel consumption from this engine. Fuel consumption shall be determined by multiplying the maximum hourly fuel consumption rate of the engine (213.2 gal/hr) by the hours the engine was operated in the month. Monthly fuel consumption shall be used in a twelve month rolling total to monitor compliance with the annual limitations. Each month a new twelve month total shall be calculated using the previous twelve months data.

7.4 Hours of operation shall be recorded monthly for this engine and used to calculate the monthly fuel consumption as required by Condition 7.3.

7.5 This engine is subject to RACT requirements for VOC emissions (Colorado Regulation No. 3, Part B, Section III.D and Colorado Regulation No. 7, Section II.C.2). RACT for VOC shall be met by complying with the requirements in 40 CFR Part 60 Subpart IIII (Condition 7.8 of this permit).

7.6 This engine is subject to RACT requirements for NO_X, PM_{10} and CO emissions (Colorado Regulation No. 3, Part B, Section III.D.2.a). RACT for NO_X, PM_{10} and CO shall be met by complying with the requirements in 40 CFR Part 60 Subpart IIII (Condition 7.8 of this permit).

7.7 Opacity of emissions from this engine shall not exceed the following:

7.7.1 Except as provided for in Condition 7.7.2 below, no owner or operator of a source shall allow or cause the emission into the atmosphere of any air pollutant which is in excess of 20% opacity (Colorado Construction Permit 07BO0830 and Colorado Regulation No. 1, Section II.A.1).

7.7.2 No owner or operator of a source shall allow or cause to be emitted into the atmosphere any air pollutant resulting from the building of a new fire, cleaning of fire boxes, soot blowing, start-up, process modifications, or adjustment or occasional cleaning of control equipment which is in excess of 30% opacity for a period or periods aggregating more than six (6) minutes in any sixty (60) consecutive minutes (Colorado Construction Permit 07BO0830 and Colorado Regulation No. 1, Section II.A.4).

Compliance with these limitations shall be monitored by conducting visual emission observations in accordance with EPA Reference Method 9 as follows:

7.7.3 Compliance with the opacity standard in Condition 7.7.2 shall be monitored by conducting visible emission observations in accordance with EPA Method 9, once per year. This opacity observation shall be taken within one (1) hour of the commencement of any of the specific activities identified in Condition 7.7.2 and every 24 hours thereafter until that activity is completed.

7.7.4 An opacity observation shall be conducted annually (calendar year period) to monitor compliance with the opacity limit in Condition 7.7.1. Annual opacity observations shall be separated by a period of four (4) months.

If the engine is operated more than 250 hours in any calendar year period, a second opacity observation shall be conducted. If two opacity readings are conducted in the annual (calendar year) period, such readings shall be conducted at least thirty days apart.

7.7.5 If the engine is not operated during the annual (calendar year) period, then no opacity observations (specified in Conditions 7.7.3 and 7.7.4) are required.

7.7.6 Subject to the provisions of C.R.S. 25-7-123.1 and in the absence of credible evidence to the contrary, exceedance of the opacity limit shall be considered to exist from the time a Method 9 reading is taken that shows an exceedance of the opacity limit until a Method 9 reading is taken that shows the opacity is less than the opacity limit.

7.7.7 All opacity observations shall be performed by an observer with current and valid Method 9 certification. Results of Method 9 readings and a copy of the certified Method 9 reader's certificate shall be kept on site and made available to the Division upon request.

7.8 This engine is subject to the requirements in 40 CF Part 60 Subpart IIII, "Standards of Performance for Stationary Compression Ignition Internal Combustion Engines", as adopted by reference in Colorado Regulation No. 6, Part A. The specific applicable requirements are included in Section II, Condition 5 of this permit.

7.9 These engines are subject to the requirements in 40 CF Part 63 Subpart ZZZZ, "National Emissions Standards for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines." The specific applicable requirements are as follows:

Note that as of the date of revised permit issuance [October 7, 2013], the requirements in 40 CFR Part 63 Subpart ZZZZ promulgated after July 1, 2007 have not been adopted into Colorado Regulation No. 8, Part E by the Division and are therefore not state-enforceable. In the event that the Division adopts these requirements they will be state-enforceable.

A new or reconstructed stationary RICE located at an area source must meet the requirements of this part by meeting the requirements of 40 CFR part 60 subpart IIII, for compression ignition engines. No further requirements apply for such engines under this part. (63.6590(c) and (c)(1))

8. Units G032 thru G040: Internal Combustion Engines, Diesel Fuel Fired

Nine (9) Emergency Generators

Parameter	Permit Condition Number	Limitations		Compliance Emission Factor	Monitoring	
		Short Term	Long Term		Method	Interval
Total Emission Limits from All Units:	8.1.					
NO_X		N/A	21.65 tons/yr	277.6 lbs/10^3 gal	Recordkeeping and Calculation	Monthly
CO		N/A	2.64 tons/yr	33.8 lbs/10^3 gal		
Emission from Each Unit	8.2					
PM_{10}		0.35 lbs/hr	N/A	N/A	See Condition 8.2	
CO		5.9 lbs/hr	N/A	N/A		
SO_2	8.3.	**Applies to Each Engine:** 0.8 lbs/MMBtu		N/A	Fuel Restriction	See Condition 8.3.
All Units: Total Diesel Fuel Consumption	8.4.	N/A	155,970 gal/yr	N/A	Calculation	Monthly
Sulfur Content of Diesel Fuel	8.5.	Sulfur Content Shall Not Exceed 0.0045% by Weight		N/A	ASTM Methods	See Condition 8.5.
Hours of Operation	8.6.	N/A	N/A	N/A	Recordkeeping	Monthly
RACT - VOC Emissions	8.7.	RACT is Determined to be Good Combustion Practices and use of Low Sulfur ($\leq$ 0.0045 % by weight) Diesel Fuel		N/A	Certification	Annually
RACT - PM_{10} and CO Emissions	8.8.	RACT is Determined to be Good Combustion Practices and use of Low Sulfur ($\leq$ 0.0045 % by weight) Diesel Fuel		N/A	Certification	Annually
Opacity	8.9.	Not to Exceed 20% Except as Provided for Below		N/A	EPA Method 9	Annually
		For Certain Operational Activities – Not to Exceed 30%, for a Period or Periods Aggregating More than Six (6) Minutes in any 60 Consecutive Minutes				

Parameter	Permit Condition Number	Limitations Short Term	Limitations Long Term	Compliance Emission Factor	Monitoring Method	Monitoring Interval
NSPS IIII Requirements	8.10.	HC – 1.0 g/hp-hr NO_X – 6.9 g/hp-hr CO – 8.5 g/hp-hr PM – 0.4 g/hp-hr		N/A	See Condition 8.10.	
MACT ZZZZ Requirements	8.11	Compliance with MACT met by complying with NSPS Subpart IIII		N/A	See Condition 8.11.	

8.1 **Total** Nitrogen Oxide (NO_X) and Carbon Monoxide (CO) emissions **from all engines** shall not exceed the above limitations (Colorado Construction Permit 07BO0830). Compliance with the emission limitations shall be monitored by calculating emissions monthly using the emission factors listed above (from manufacturer, converted to lb/gal by dividing manufacturer's lbs/hr rate by 173.3 gal).

Monthly emissions, **from each engine**, shall be calculated by the end of the subsequent month, using the above emissions factors and the monthly diesel fuel consumption (as required by Condition 8.4) in the following equation.

$$\text{tons/mo} = \frac{\text{EF (lbs/}10^3\text{ gal) x diesel fuel consumption (gal/mo)}}{\text{2000 lbs/ton}}$$

Monthly emissions from each engine shall be summed together and a twelve month rolling total of emissions shall be maintained and used to monitor compliance with the annual limitations. Each month a new twelve month total shall be calculated using the previous twelve months data.

8.2 Short term emissions of CO and Particulate Matter less than 10 microns (PM_{10}) shall not exceed the above limitations (Colorado Construction Permit 07BO0830). In the absence of credible evidence to the contrary compliance with the short-term emission limitations shall be presumed provided each engine is operated and maintained in accordance with manufacturer's recommendations and good engineering practices.

8.3 Sulfur Dioxide (SO_2) emissions **from each engine** shall not exceed 0.8 lbs/MMBtu (Colorado Construction Permit 07BO0830 and Colorado Regulation No. 1 Section VI.B.4.b.(i)). In the absence of credible evidence to the contrary, compliance with the SO_2 limitation shall be presumed provided that the diesel fuel used as fuel meets the sulfur limitation in Condition 8.5.

8.4 **Total** Consumption of Diesel Fuel **from all engines** shall not exceed the above limitations (Colorado Construction Permit 07BO0830). Compliance with the limitations shall be monitored by determining, by the end of the subsequent month, fuel consumption **from each engine**. Fuel consumption from each engine shall be determined by multiplying the maximum hourly fuel consumption rate of the engine (from manufacturer, based on operation at 100% load) by the hours the engine was operated in the month.

Engine	Horsepower	Maximum Hourly Fuel Rate
G032 – G037	3604 hp	173.3 gal/hr
G038 – G040	2937 hp	138.9 gal/hr

Monthly fuel consumption from each engine shall be summed together and a twelve month rolling total of fuel consumption shall be maintained and used to monitor compliance with the annual limitation. Each month a new twelve month total shall be calculated using the previous twelve months data.

8.5 The sulfur content of the diesel fuel used in these engines shall not exceed 0.0045% by weight (Colorado Construction Permit 07BO0830). Diesel fuel shall be sampled to determine weight percent sulfur of the fuel. Each shipment of fuel shall be sampled and analyzed using appropriate ASTM methods or equivalent, if approved in advance by the Division. In lieu of sampling, vendor data may be used to determine the weight percent sulfur provided sampling and analysis was performed using the appropriate ASTM methods.

8.6 Hours of operation shall be recorded monthly **for each engine** and used to calculate the monthly fuel consumption as required by Condition 8.4.

8.7 **All units** are subject to RACT requirements for VOC emissions (Colorado Construction Permit 07BO0830 and Colorado Regulation No. 7, Section II.C.2). RACT has been determined to be good combustion practices (operation according to manufacturer specifications) and use of low sulfur ($\leq$ 0.0045 % by weight) diesel fuel, as specified in Condition 8.5.

8.8 **All units** are subject to RACT requirements for PM_{10} and CO emissions (Colorado Construction Permit 07BO0830 and Colorado Regulation No. 3, Part B, Section III.D.2.a). RACT has been determined to be good combustion practices (operation according to manufacturer specifications) and use of low sulfur ($\leq$ 0.0045 % by weight) diesel fuel, as specified in Condition 8.5.

8.9 Opacity of emissions **from each engine** shall not exceed the following:

8.9.1 Except as provided for in Condition 8.9.2 below, no owner or operator of a source shall allow or cause the emission into the atmosphere of any air pollutant which is in excess of 20% opacity (Colorado Construction Permit 07BO0830 and Colorado Regulation No. 1, Section II.A.1).

8.9.2 No owner or operator of a source shall allow or cause to be emitted into the atmosphere any air pollutant resulting from the building of a new fire, cleaning of fire boxes, soot blowing, start-up, process modifications, or adjustment or occasional cleaning of control equipment which is in excess of 30% opacity for a period or periods aggregating more than six (6) minutes in any sixty (60) consecutive minutes (Colorado Construction Permit 07BO0830 and Colorado Regulation No. 1, Section II.A.4).

Compliance with these limitations shall be monitored by conducting visual emission observations in accordance with EPA Reference Method 9 as follows:

8.9.3 Compliance with the opacity standard in Condition 8.9.2 shall be monitored by conducting visible emission observations in accordance with EPA Method 9, once per year **on each engine**. This opacity observation shall be taken within one (1) hour of the commencement of any of the specific activities identified in Condition 8.9.2 and every 24 hours thereafter until that activity is completed.

8.9.4 An opacity observation shall be conducted annually (calendar year period) **on each engine** to monitor compliance with the opacity limit in Condition 8.9.1. Annual opacity observations for each engine shall be separated by a period of four (4) months.

If an engine is operated more than 250 hours in any calendar year period, a second opacity observation shall be conducted for that engine. If two opacity readings are conducted in the annual (calendar year) period for an engine, such readings shall be conducted at least thirty days apart.

8.9.5 If an engine is not operated during the annual (calendar year) period, then no opacity observations (specified in Conditions 8.9.3 and 8.9.4) are required for that engine.

8.9.6 Subject to the provisions of C.R.S. 25-7-123.1 and in the absence of credible evidence to the contrary, exceedance of the opacity limit shall be considered to exist from the time a Method 9 reading is taken that shows an exceedance of the opacity limit until a Method 9 reading is taken that shows the opacity is less than the opacity limit.

8.9.7 All opacity observations shall be performed by an observer with current and valid Method 9 certification. Results of Method 9 readings and a copy of the certified Method 9 reader's certificate shall be kept on site and made available to the Division upon request.

8.10 Units G032 thru G040 are subject to the requirements in 40 CF Part 60 Subpart IIII, "Standards of Performance for Stationary Compression Ignition Internal Combustion Engines", as adopted by reference in Colorado Regulation No. 6, Part A. The specific applicable requirements are included in Section II, Condition 5 of this permit.

8.11 These engines are subject to the requirements in 40 CF Part 63 Subpart ZZZZ, "National Emissions Standards for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines." The specific applicable requirements are as follows:

Note that as of the date of revised permit issuance [October 7, 2013], the requirements in 40 CFR Part 63 Subpart ZZZZ promulgated after July 1, 2007 have not been adopted into Colorado Regulation No. 8, Part E by the Division and are therefore not state-enforceable. In the event that the Division adopts these requirements they will be state-enforceable.

A new or reconstructed stationary RICE located at an area source must meet the requirements of this part by meeting the requirements of 40 CFR part 60 subpart IIII, for compression ignition engines. No further requirements apply for such engines under this part. (63.6590(c) and (c)(1))

9. Unit B002: Cleaver Brooks Boiler, Rated at 32.66 MMBtu/hr, Natural Gas Fired, With Diesel and/or Jet Fuel as Backup.

Parameter	Permit Condition Number	Limitations Short Term	Limitations Long Term	Compliance Emission Factor	Monitoring Method	Monitoring Interval
NO_X	9.1	N/A	5.1 tons/yr	See Conditions 9.1	Recordkeeping and Calculation	Monthly
CO			5.2 tons/yr			
Fuel Consumption and Operating Limitations	9.2	N/A	Natural Gas: 284.5 MMscf/yr Fuel Oil: 11,200 gal/yr and 48 hrs/yr	N/A	Fuel Meters and Recordkeeping	Monthly
Particulate Matter	9.3	0.202 lbs/MMBtu		N/A	Fuel Restriction	See Condition 9.3.
Sulfur Content of Fuel Oil	9.4	Sulfur Content Shall Not Exceed 0.0015 % by Weight		N/A	ASTM Analysis	Each Shipment of Fuel Oil
NSPS General Provisions	9.5	N/A	N/A	N/A	As Required by NSPS General Provisions	Subject to NSPS General Provisions
RACT – NO_X, CO and PM_{10}	9.6	NO_X – Low NOx Burners CO – Good Combustion Practices PM_{10} – Use of Natural Gas or Diesel/Jet Fuel with Sulfur Content Not to Exceed 0.0015% by Weight		N/A	Certification	Annually
RACT – VOC	9.7	Good Combustion Practices		N/A	Certification	Annually
Opacity	9.8	**State-Only** Not to Exceed 20%		N/A	See Condition 9.8.	
		Not to Exceed 20%, Except as Provided for Below				
		For Certain Operational Activities – Not to Exceed 30% for a Period or Periods Aggregating More than Six (6) Minutes in Any 60 Consecutive Minutes				
NSP Dc Opacity **– Applies Only When Burning Diesel and/or Jet Fuel**	9.9	Not to Exceed 20% Except for one Six (6) Minute Average Not to Exceed 27% Per Hour		N/A	EPA Method 9	See Condition 9.9.
Startup Notice	9.10	Notify Division within 15 Days After Startup		NA	See Condition 9.11	

Parameter	Permit Condition Number	Limitations Short Term	Limitations Long Term	Compliance Emission Factor	Monitoring Method	Monitoring Interval
Compliance Certification	9.11	Certify Compliance within 180 Days of Startup		N/A	Certification	Within 180 Days
Fuel Oil Restrictions for MACT JJJJJJ Applicability	9.12	Fuel oil can only be burned during periods of gas curtailment, gas supply emergencies, or periodic testing. Periodic testing is limited to 48 hours per calendar year.		N/A	Recordkeeping	Annually

9.1 Emissions of NO_X and CO shall not exceed the above limitations (As provided for under the provisions of Section I, Condition 1.3 and Colorado Regulation No. 3, Part B, Section II.A.6 and Part C, Section X, based on the requested emissions indicated on the APEN received on September 30, 2011). Compliance with annual emission limitations shall be monitored by calculating emissions monthly using the emission factors identified in the table below:

Pollutant	Natural Gas		Fuel Oil	
	lbs/MMscf	Source	lbs/10^3 gal	Source
NO_X	35	Manufacturer, converted to lb/MMscf based on a heat content of 1,000 Btu/scf	19.6	Manufacturer, converted to lb/10^3 gal based on a heat content of 140,000 Btu/gal
CO	36		5.46	

Monthly emissions shall be calculated by the end of the subsequent month, using the above emission factors in the following equation:

$$\text{tons/mo} = \frac{\text{EF (lbs/MMscf or lbs/}10^3\text{ gal) x monthly fuel consumption (MMscf/mo or gal/mo)}}{\text{2000 lbs/ton}}$$

Monthly emissions shall be used in a twelve month rolling total to monitor compliance with the annual limitations. Each month a new twelve month total shall be calculated using the previous twelve months data.

9.2 Consumption of Fuel shall not exceed the following limitations (As provided for under the provisions of Section I, Condition 1.3 and Colorado Regulation No. 3, Part B, Sections II.A.6 and III.E and Part C, Section X, based on the requested fuel use indicated on the APEN received on September 30, 2011, converted to MMscf and gallons based on the heat inputs indicated on the APEN):

9.2.1 Consumption of natural gas shall not exceed 284.5 MMscf/yr.

9.2.2 Consumption of diesel and/or jet fuel shall not exceed 11,200 gal/yr.

9.2.3 Hours of operation when burning diesel and/or jet fuel shall not exceed 48 hrs/yr.

Compliance with the fuel consumption limits shall be monitored by determining fuel consumption by the end of the subsequent month. Fuel consumption shall be determined using fuel meters, hours of operation and any other records as necessary. Monthly fuel consumption shall be used in a twelve month rolling total to monitor compliance with the annual limitations. Separate totals shall be maintained for natural gas and fuel oil consumption. Each month a new twelve month total shall be calculated using the previous twelve months data.

Compliance with the hours of operation limit for the unit when burning fuel oil shall be monitored by recording hours of operation when burning fuel oil monthly. Compliance with the annual limit shall be based on the total hours of operation when burning fuel oil on a calendar year basis.

9.3 Particulate Matter emissions shall not exceed the above limitations (Colorado Regulation No. 1, Section III.A.1.b). Compliance with the particulate matter emission limit is presumed, in the absence of credible evidence to the contrary, since only natural gas and/or ultra low sulfur ($\leq$ 0.0015% by weight) diesel and/or jet fuel is permitted to be used as fuel.

Note that the numeric PM standards were determined using the design heat input for the boiler (32.66 MMBtu/hr) in the following equation:

$PE = 0.5 \times (FI)^{-0.26,}$ where: PE = particulate standard in lbs/MMBtu
FI = fuel input in MMBtu/hr

9.4 The Fuel Oil (Diesel and/or Jet Fuel) shall have a Sulfur Content not to exceed 0.0015% by weight (As provided for under the provisions of Section I, Condition 1.3 and Colorado Regulation No. 3, Part B, Sections II.A.6 and III.E and Part C, Section X, based on the sulfur content of fuel oil indicated on the APEN received on September 30, 2011). Compliance with this requirement shall be monitored as follows:

Compliance with the fuel limitations shall be monitored by sampling and analyzing each shipment of fuel oil to determine if the sulfur content using appropriate ASTM methods, or equivalent is approved in advance by the Division. In lieu of sampling, vendor data may be used to determine the sulfur content provided that the sampling and analysis was performance using the appropriate ASTM methods.

9.5 This unit is subject to the requirements in 40 CFR Part 60, Subpart A – General Provisions, as adopted by reference in Colorado Regulation No. 6, Part A. Specifically, this unit is subject to the requirements identified in Condition 6 and the following requirement:

9.5.1 Notifications of the dates the boiler commences construction and initial startup shall be submitted as required under § 60.7(a)(1) and (3). As noted in 60.7(a)(1) the construction notice is due 30 days after construction commences and notice of startup is due 15 days after initial startup commences. Such notifications shall include the information specified in 40 CFR Part 60 Subpart Dc § 60.48c(a). Note that the notice

to commence construction was submitted via e-mail on July 2, 2013 (construction commenced on June 28, 2013).

9.6 This unit is subject to RACT requirements for NO_X, PM_{10} and CO emissions (Colorado Regulation No. 3, Part B, Section III.D.2.a). RACT has been determined as follows:

9.6.1 For NO_X – low NO_X burners.

9.6.2 For PM_{10} – use of natural gas and fuel oil with a sulfur content not to exceed 0.0015% by weight as fuel in accordance with Condition 9.4.

9.6.3 For CO – us of good combustion practices.

9.7 This unit is subject to RACT requirements for VOC emissions (Colorado Regulation No. 3, Part B, Section III.D.2.a and Colorado Regulation No. 7, Section II.C.2). RACT has been determined to be use of good combustion practices.

9.8 This unit is subject to the following opacity requirements:

9.8.1 **State-Only Requirement:** No owner or operator may discharge, or cause the discharge into the atmosphere of any particulate matter which is greater than 20% opacity (Colorado Regulation No. 6, Part B, Section II.C.3).

This opacity standard applies at all times except during periods of startup, shutdown and malfunction (40 CFR Part 60 Subpart A § 60.11(c), as adopted by reference in Colorado Regulation No. 6, Part B, Section I.A).

Note that this opacity requirement is more stringent than the opacity requirement in Condition 9.8.3 during periods of building of a new fire, cleaning of fire boxes, soot blowing, process modifications and adjustment or occasional cleaning of control equipment.

9.8.2 Except as provided for in Condition 9.8.3 below, no owner or operator of a source shall allow or cause the emission into the atmosphere of any air pollutant which is in excess of 20% opacity (Colorado Regulation No. 1, Section II.A.1).

9.8.3 No owner or operator of a source shall allow or cause to be emitted into the atmosphere any air pollutant resulting from the building of a new fire, cleaning of fire boxes, soot blowing, start-up, process modifications, or adjustment or occasional cleaning of control equipment which is in excess of 30% opacity for a period or periods aggregating more than six (6) minutes in any sixty (60) consecutive minutes (Colorado Regulation No. 1, Section II.A.4).

Compliance with the opacity requirements shall be monitored as follows:

9.8.4 **When Burning Natural Gas as Fuel:** In the absence of credible evidence to the contrary, each boiler shall be presumed to be in compliance with the above opacity requirements whenever natural gas is used as fuel.

9.8.5 **When Burning Diesel and/or Jet Fuel** compliance with the opacity requirements shall be monitored as follows:

9.8.5.1 Compliance with the opacity standard in Condition 9.8.3 shall be monitored by conducting visible emission observations in accordance with EPA Method 9, once per year. This opacity observation shall be taken within one (1) hour of the commencement of any of the specific activities identified in Condition 9.8.3 and every 24 hours thereafter until that activity is completed.

A visible emissions observation is not required for any annual period where no diesel and/or jet fuel has been burned. In addition, a visible emission observation is not required for any annual period where no specific activities identified in Condition 9.8.3 have occurred when diesel and/or jet fuel has been burned as fuel.

9.8.5.2 Compliance with the opacity standard in Condition 9.8.2 shall be monitored by conducting visible emission observations in accordance with EPA Method 9 annually. Such opacity observation shall be conducted within 24 hours of completion of any specific activity identified in Condition 9.8.2.

A visible emissions observation is not required for any annual period where no diesel and/or jet fuel has been burned.

9.8.5.3 Compliance with the opacity standard in Condition 9.8.1 is presumed, in the absence of credible evidence to the contrary, provided the visible emission observation conducted under the provisions of Condition 9.8.5.2 meets the limitations in Condition 9.8.1.

9.8.5.4 Subject to the provisions of C.R.S. 25-7-123.1 and in the absence of credible evidence to the contrary, exceedance of the opacity limit shall be considered to exist from the time a Method 9 reading is taken that shows an exceedance of the opacity limit until a Method 9 reading is taken that shows the opacity is less than the opacity limit.

9.8.5.5 All opacity observations shall be performed by an observer with current and valid Method 9 certification. Results of Method 9 readings and a copy of the certified Method 9 reader's certification shall be made available to the Division upon request.

9.9 No owner or operator of a source shall cause to be discharged into the atmosphere from any affected facility any gases which exhibit greater than 20 percent opacity (6-minute average), except for one 6-minute period per hour of not more than 27 percent opacity (40 CFR Part 60

Subpart Dc § 60.43c(c), as adopted by reference in Colorado Regulation No. 6, Part A). **This opacity standard only applies when the unit is burning diesel and/or jet fuel.**

The opacity standard applies at all times, except during periods of startup, shutdown, or malfunction (40 CFR Part 60 Subpart Dc § 60.43c(d), as adopted by reference in Colorado Regulation No. 6, Part A).

Note that this opacity requirement is more stringent than the opacity requirement in Condition 9.8.3 during periods of building of a new fire, cleaning of fire boxes, soot blowing, process modifications and adjustment or occasional cleaning of control equipment.

Compliance with the opacity requirements shall be monitored as follows:

9.9.1 The owner or operator of an affected facility subject to an opacity standard in §60.43c(c) that is not required to use a COMS due to §60.47c(c), (d), (e) or (f) that elects not to use a COMS shall conduct a performance test using Method 9 of appendix A–4 of this part and the procedures in §60.11 to demonstrate compliance with the applicable limit in §60.43c by April 29, 2011, within 45 days of stopping use of an existing COMS, or within 180 days after initial startup of the facility, whichever is later, and shall comply with Conditions 9.9.1.1 through 9.9.1.3. The observation period for Method 9 of appendix A–4 of this part performance tests may be reduced from 3 hours to 60 minutes if all 6-minute averages are less than 10 percent and all individual 15-second observations are less than or equal to 20 percent during the initial 60 minutes of observation. (60.47c(a))

9.9.1.1 Except as provided in Conditions 9.9.1.2 and 9.9.1.3, the owner or operator shall conduct subsequent Method 9 of appendix A–4 of this part performance tests using the procedures in Condition 3.8.1 according to the applicable schedule in Conditions 9.9.1.1.a through 9.9.1.1.d, as determined by the most recent Method 9 of appendix A–4 of this part performance test results. (60.48c(a)(1))

a. If no visible emissions are observed, a subsequent Method 9 of appendix A–4 of this part performance test must be completed within 12 calendar months from the date that the most recent performance test was conducted or within 45 days of the next day that fuel with an opacity standard is combusted, whichever is later (60.47c(a)(1)(i));

b. If visible emissions are observed but the maximum 6-minute average opacity is less than or equal to 5 percent, a subsequent Method 9 of appendix A–4 of this part performance test must be completed within 6 calendar months from the date that the most recent performance test was conducted or within 45 days of the next day that fuel with an opacity standard is combusted, whichever is later (60.47c(a)(1)(ii));

c. If the maximum 6-minute average opacity is greater than 5 percent but less than or equal to 10 percent, a subsequent Method 9 of appendix

A–4 of this part performance test must be completed within 3 calendar months from the date that the most recent performance test was conducted or within 45 days of the next day that fuel with an opacity standard is combusted, whichever is later (60.47c(a)(1)(iii)); or

d. If the maximum 6-minute average opacity is greater than 10 percent, a subsequent Method 9 of appendix A–4 of this part performance test must be completed within 45 calendar days from the date that the most recent performance test was conducted. (60.47c(a)(1)(iv))

9.9.1.2 If the maximum 6-minute opacity is less than 10 percent during the most recent Method 9 of appendix A–4 of this part performance test, the owner or operator may conduct Method 22 observations in accordance with § 60.47c(a)(2).

9.9.1.3 If the maximum 6-minute opacity is less than 10 percent during the most recent Method 9 of appendix A–4 of this part performance test, the owner or operator may monitor opacity using a digital opacity compliance system in accordance with § 60.47c(a)(3).

9.9.2 The owner or operator of each affected facility subject to the SO_2emission limits of §60.42c, or the PM or opacity limits of §60.43c, shall submit to the Division the performance test data from the initial and any subsequent performance tests and, if applicable, the performance evaluation of the CEMS and/or COMS using the applicable performance specifications in appendix B of this part. (§ 60.48c(b)

This unit is not subject to a PM emission limitations and the SO_2 emission limitations are included in the permit shield for streamlined conditions (Section III.3), therefore, this requirement applies only with respect to the opacity requirements in Condition 9.9.

9.9.3 In addition to the applicable requirements in §60.7, the owner or operator of an affected facility subject to the opacity limits in §60.43c(c) (Condition 9.9) shall submit excess emission reports for any excess emissions from the affected facility that occur during the reporting period [semi-annual monitoring period] and maintain records according to the requirements specified in § 60.48c(c)(1) through (3), as applicable to the visible emissions monitoring method used. (§ 60.48c(c))

9.10 Unless prior and mutually acceptable arrangements have been made, the applicant shall give notice to the Division within fifteen calendar days after the date on which commencement of operation takes place. (Colorado Regulation No. 3, Part B, Section III.G.1)

9.11 Within one hundred eighty (180) calendar days after commencement of operation, the permittee shall certify compliance with the conditions in this Section II.9 of this permit (Colorado Regulation No. 3, Part B, Section III.G.2). Submittal of the first required semi-annual monitoring report (Appendix B), after startup of this unit shall serve as the self-certification that the newly installed boiler can comply with the conditions in this Section II.9 of this permit.

9.12 In accordance with the requirements in 40 CFR Part 63 Subpart JJJJJJ § 63.11195(e), gas-fired boilers are not subject to the provisions in 40 CFR Part 63 Subpart JJJJJJ. A gas-fired boiler is defined in 40 CFR Part 63 Subpart JJJJJJ § 63.11237as "any boiler that burns gaseous fuels not combined with solid fuels, burns liquid fuel only during periods of gas curtailment, gas supply emergencies, or periodic testing on liquid fuel. Periodic testing of liquid fuel shall not exceed a combined total of 48 hours during any calendar year." The permittee shall retain records for this boiler documenting the reason for burning fuel oil and the hours that fuel oil is burned. In the event that fuel oil is burned in the boiler for reasons other than natural gas curtailment, gas supply emergency or periodic testing or if periodic testing exceeds 48 hours during a calendar year, the provision in 40 CFR Part 63 Subpart JJJJJJ apply to this boiler. Within 60 days of triggering the requirements in 40 CFR Part 63 Subpart JJJJJJ, the permittee shall submit an application to revise this permit to include the appropriate requirements.

SECTION III - Permit Shield

Regulation No. 3, 5 CCR 1001-5, Part C, §§ I.A.4, V.D., & XIII.B and § 25-7-114.4(3)(a), C.R.S.

1. Specific Non-Applicable Requirements

Based on the information available to the Division and supplied by the applicant, the following parameters and requirements have been specifically identified as non-applicable to the facility to which this permit has been issued. This shield does not protect the source from any violations that occurred prior to or at the time of permit issuance. In addition, this shield does not protect the source from any violations that occur as a result of any modifications or reconstruction on which construction commenced prior to permit issuance.

Emission Unit Description & Number	Applicable Requirement	Justification
Facility	Colorado Regulation No. 1, Sections III.D.2.a.(i).B & (ii).B (fugitive particulate emission requirements for paved and unpaved roads)	These requirements are not applicable as this facility does not construct or maintain unpaved roadways or deposit materials on paved roadways which create fugitive particulate emissions.
Facility	Colorado Regulation No. 1, Section III.D.2.b. (ii) (fugitive particulate emission requirements for construction activities)	These requirements are not applicable as this facility does not clear or level land.
Facility	Colorado Regulation No. 1, Sections III.D.2.e.(i), (v) & f.(ii) (fugitive particulate emission requirements for haul roads and haul vehicles)	These requirements are not applicable as this facility does not have haul roads or use haul trucks.
Facility	Colorado Regulation No. 7, Section I.B.2.d & e (report requirements)	These requirements are not applicable as the potential to emit of VOC for existing (commenced operation before October 30, 1989) units is less than 100 tpy.
Facility	Colorado Regulation No. 15, Sections II.B and V (motor vehicle air conditioning service requirements)	These requirements are not applicable as this facility does not service motor vehicle air conditioners (MVAC).
Facility	Colorado Regulation No. 15, Sections IV.A.1 thru 4	These requirements are not applicable as this facility does not perform air conditioning and refrigeration service.
Facility	40 CFR Part 82, Subpart B, §§ 82.30, 82.32, 82.34(a) & (d), and 82.42(a) & (b)(1), (2) & (4), as adopted by reference in Colorado Regulation No. 15, Section II.B (repair, maintenance, service or disposal of motor vehicle air conditioners)	These requirements are not applicable as this facility does not service MVAC and/or MVAC-like appliances.
Facility	40 CFR Part 82, Subpart F, §§ 82.156(a)(5), (g) and 82.161(a)(5) as adopted by reference in Colorado Regulation No. 15, Section II.A (required practices and technician certification for recycling and emissions reduction from repair, maintenance, service or disposal of appliances containing ozone depleting compounds)	These requirements are not applicable as this facility does not service MVAC and/or MVAC-like appliances

Emission Unit Description & Number	Applicable Requirement	Justification
Units G001 thru G012, G015 thru G027 & G029 thru G031 and B001 thru B004	Colorado Regulation No. 1, Section II.A.1.d (requirements for particulate matter for units sharing a stack)	These requirements are not applicable as each of the mentioned units has its own stack.
Units B001 & B003	40 CFR Part 60, Subpart Dc, as adopted by reference in Colorado Regulation No. 6, Part A (New Source Performance Standards for Boilers less than 100 MMBtu/hr)	These requirements are not applicable as each of these units commenced construction prior to June 9, 1989.
Units B001 & B003	Colorado Regulation No. 6, Part B, Section II (New Source Performance Standards for Fuel Burning Equipment)	These requirements are not applicable as construction commenced prior to January 30, 1979.
Units B001 & B003	Colorado Regulation No. 7, Section II.C.2 (RACT requirements for new sources)	These requirements are not applicable since they commenced operation prior to October 30, 1989.
Units G001 thru G012 & G015 thru G027	40 CFR Part 60 Subpart IIII, as adopted by reference in Colorado Regulation No. 6, Part A (Standards of Performance for Compression Ignition Internal Combustion Engines)	These requirements are not applicable since these engines were manufactured before April 1, 2006.
Units G001 thru G012 & G015 thru G027	40 CFR Part 63 Subpart ZZZZ (National Emissions Standards for Hazardous Air Pollutants for Stationary Reciprocating Combustion Engines)	As specified in 40 CFR Part 63 Subpart ZZZZ § 63.6590(b)(3)(vii), existing (commenced construction or reconstruction before June 12, 2006) commercial emergency stationary RICE located at area sources of HAP emissions do not have to meet the requirements in 40 CFR Part 60 Subparts ZZZZ and A, including the initial notification requirements.
Unit B002	40 CFR Part 63 Subpart JJJJJJ (National Emission Standards for Hazardous Air Pollutants for Industrial, Commercial and Institutional Boilers Area Sources)	These requirements are not applicable to B002 since the unit is not permitted to burn liquid fuel for more than 48 hours in any calendar year.

2. General Conditions

Compliance with this Operating Permit shall be deemed compliance with all applicable requirements specifically identified in the permit and other requirements specifically identified in the permit as not applicable to the source. This permit shield shall not alter or affect the following:

2.1 The provisions of §§ 25-7-112 and 25-7-113, C.R.S., or § 303 of the federal act, concerning enforcement in cases of emergency;

2.2 The liability of an owner or operator of a source for any violation of applicable requirements prior to or at the time of permit issuance;

2.3 The applicable requirements of the federal Acid Rain Program, consistent with § 408(a) of the federal act;

2.4 The ability of the Air Pollution Control Division to obtain information from a source pursuant to § 25-7-111(2)(I), C.R.S., or the ability of the Administrator to obtain information pursuant to § 114 of the federal act;

2.5 The ability of the Air Pollution Control Division to reopen the Operating Permit for cause pursuant to Regulation No. 3, Part C, § XIII.

2.6 Sources are not shielded from terms and conditions that become applicable to the source subsequent to permit issuance.

3. Stream-lined Conditions

The following applicable requirements have been subsumed within this operating permit using the pertinent streamlining procedures approved by the U.S. EPA. For purposes of the permit shield, compliance with the listed permit conditions will also serve as a compliance demonstration for purposes of the associated subsumed requirements.

Permit Condition(s)	Streamlined (Subsumed) Requirements
Section IV, Conditions 22.b & c	**For Boilers 2 & 4 Only:** 40 CFR Part 60 Subpart Dc § 60.48c(i), as adopted by reference in Colorado Regulation 6, Part A [retain records for two (2) years]
Section II, Conditions 3.4 & 9.4	**For Boilers 2 & 4 Only:** 40 CFR Part 60 Subpart Dc § 60.42c(d), (g), (h) & (i), as adopted by reference in Colorado Regulation 6, Part A [fuel sulfur limit of 0.5 weight percent]
Section II, Conditions 3.4 & 9.4	**For Boilers 2 & 4 Only:** 40 CFR Part 60 Subpart Dc §§ 60.44c(g) & (h) & 60.46c(d)(2) & (e), as adopted by reference in Colorado Regulation 6, Part A [testing and monitoring of fuel sulfur content]
Section IV, Conditions 22.d & Appendix B.	**For Boilers 2 & 4 Only:** 40 CFR Part 60 Subpart Dc §§ 60.48c(b) (as it applies to SO_2), (d), (e)(2), (e)(11), (f) & (j), as adopted by reference in Colorado Regulation 6, Part A [semi-annual reporting for fuel sulfur limit]
Section II, Conditions 3.2 & 9.2	**For Boilers 2 & 4 Only:** 40 CFR Part 60 Subpart Dc § 60.48c(g)(3), as adopted by reference Colorado Regulation 6, part A [maintain monthly records of fuel delivered to the plant]
Section II, Condition 3.4	**For Boilers B001 & B003 Only:** Colorado Regulation No. 1, Section VI.A.3.b.(i) [SO_2 emissions shall not exceed 1.5 lb/MMBtu]
Section II, Conditions 3.4 & 9.4	**For Boilers 2 & 4 Only:** Colorado Regulation No. 1, Section IV.B.4.b.(i) [SO_2 emissions shall not exceed 0.8 lb/MMBtu]
Section II, Conditions 3.3 & 9.3	**For Boilers 2 & 4 Only:** Colorado Regulation No. 6, Part B, Section II.C.2 [**State-only** PM requirement ($PE = 0.5(FI)^{-0.26}$) for new fuel burning equipment]
Section II, Conditions 3.4 & 9.4	**For Boilers 2 & 4 Only**: Colorado Regulation No. 6, Part B, Section II.D.2.a [**State-only** SO_2 requirement (0.8 lbs/MMBtu) for new fuel burning equipment]

SECTION IV - General Permit Conditions

5/22/12 version

1. Administrative Changes

Regulation No. 3, 5 CCR 1001-5, Part A, § III.

The permittee shall submit an application for an administrative permit amendment to the Division for those permit changes that are described in Regulation No. 3, Part A, § I.B.1. The permittee may immediately make the change upon submission of the application to the Division.

2. Certification Requirements

Regulation No. 3, 5 CCR 1001-5, Part C, §§ III.B.9., V.C.16.a.& e. and V.C.17.

a. Any application, report, document and compliance certification submitted to the Air Pollution Control Division pursuant to Regulation No. 3 or the Operating Permit shall contain a certification by a responsible official of the truth, accuracy and completeness of such form, report or certification stating that, based on information and belief formed after reasonable inquiry, the statements and information in the document are true, accurate and complete.

b. All compliance certifications for terms and conditions in the Operating Permit shall be submitted to the Air Pollution Control Division at least annually unless a more frequent period is specified in the applicable requirement or by the Division in the Operating Permit.

c. Compliance certifications shall contain:

(i) the identification of each permit term and condition that is the basis of the certification;

(ii) the compliance status of the source;

(iii) whether compliance was continuous or intermittent;

(iv) method(s) used for determining the compliance status of the source, currently and over the reporting period; and

(v) such other facts as the Air Pollution Control Division may require to determine the compliance status of the source.

d. All compliance certifications shall be submitted to the Air Pollution Control Division and to the Environmental Protection Agency at the addresses listed in Appendix D of this Permit.

e. If the permittee is required to develop and register a risk management plan pursuant to § 112(r) of the federal act, the permittee shall certify its compliance with that requirement; the Operating Permit shall not incorporate the contents of the risk management plan as a permit term or condition.

3. Common Provisions

Common Provisions Regulation, 5 CCR 1001-2 §§ II.A., II.B., II.C., II,.E., II.F., II.I, and II.J

a. To Control Emissions Leaving Colorado

When emissions generated from sources in Colorado cross the State boundary line, such emissions shall not cause the air quality standards of the receiving State to be exceeded, provided reciprocal action is taken by the receiving State.

b. Emission Monitoring Requirements

The Division may require owners or operators of stationary air pollution sources to install, maintain, and use instrumentation to monitor and record emission data as a basis for periodic reports to the Division.

c. Performance Testing

The owner or operator of any air pollution source shall, upon request of the Division, conduct performance test(s) and furnish the Division a written report of the results of such test(s) in order to determine compliance with applicable emission control regulations.

Performance test(s) shall be conducted and the data reduced in accordance with the applicable reference test methods unless the Division:

(i) specifies or approves, in specific cases, the use of a test method with minor changes in methodology;

(ii) approves the use of an equivalent method;

(iii) approves the use of an alternative method the results of which the Division has determined to be adequate for indicating where a specific source is in compliance; or

(iv) waives the requirement for performance test(s) because the owner or operator of a source has demonstrated by other means to the Division's satisfaction that the affected facility is in compliance with the standard. Nothing in this paragraph shall be construed to abrogate the Commission's or Division's authority to require testing under the Colorado Revised Statutes, Title 25, Article 7, and pursuant to regulations promulgated by the Commission.

Compliance test(s) shall be conducted under such conditions as the Division shall specify to the plant operator based on representative performance of the affected facility. The owner or operator shall make available to the Division such records as may be necessary to determine the conditions of the performance test(s). Operations during period of startup, shutdown, and malfunction shall not constitute representative conditions of performance test(s) unless otherwise specified in the applicable standard.

The owner or operator of an affected facility shall provide the Division thirty days prior notice of the performance test to afford the Division the opportunity to have an observer present. The Division may waive the thirty day notice requirement provided that arrangements satisfactory to the Division are made for earlier testing.

The owner or operator of an affected facility shall provide, or cause to be provided, performance testing facilities as follows:

(i) Sampling ports adequate for test methods applicable to such facility;

(ii) Safe sampling platform(s);

(iii) Safe access to sampling platform(s); and

(iv) Utilities for sampling and testing equipment.

Each performance test shall consist of at least three separate runs using the applicable test method. Each run shall be conducted for the time and under the conditions specified in the applicable standard. For the purpose of determining compliance with an applicable standard, the arithmetic mean of results of at least three runs shall apply. In the event that a sample is accidentally lost or conditions occur in which one of the runs must be discontinued because of forced shutdown, failure of an irreplaceable portion of the sample train, extreme meteorological conditions, or other circumstances beyond the owner or operator's control, compliance may, upon the Division's approval, be determined using the arithmetic mean of the results of the two other runs.

Nothing in this section shall abrogate the Division's authority to conduct its own performance test(s) if so warranted.

d. Affirmative Defense Provision for Excess Emissions during Malfunctions

An affirmative defense to a claim of violation under these regulations is provided to owners and operators for civil penalty actions for excess emissions during periods of malfunction. To establish the affirmative defense and to be relieved of a civil penalty in any action to enforce an applicable requirement, the owner or operator of the facility must meet the notification requirements below in a timely manner and prove by a preponderance of evidence that:

(i) The excess emissions were caused by a sudden, unavoidable breakdown of equipment, or a sudden, unavoidable failure of a process to operate in the normal or usual manner, beyond the reasonable control of the owner or operator;

(ii) The excess emissions did not stem from any activity or event that could have reasonably been foreseen and avoided, or planned for, and could not have been avoided by better operation and maintenance practices;

(iii) Repairs were made as expeditiously as possible when the applicable emission limitations were being exceeded;

(iv) The amount and duration of the excess emissions (including any bypass) were minimized to the maximum extent practicable during periods of such emissions;

(v) All reasonably possible steps were taken to minimize the impact of the excess emissions on ambient air quality;

(vi) All emissions monitoring systems were kept in operation (if at all possible);

(vii) The owner or operator's actions during the period of excess emissions were documented by properly signed, contemporaneous operating logs or other relevant evidence;

(viii) The excess emissions were not part of a recurring pattern indicative of inadequate design, operation, or maintenance;

(ix) At all times, the facility was operated in a manner consistent with good practices for minimizing emissions. This section is intended solely to be a factor in determining whether an affirmative defense is available to an owner or operator, and shall not constitute an additional applicable requirement; and

(x) During the period of excess emissions, there were no exceedances of the relevant ambient air quality standards established in the Commissions' Regulations that could be attributed to the emitting source.

The owner or operator of the facility experiencing excess emissions during a malfunction shall notify the division verbally as soon as possible, but no later than noon of the Division's next working day, and shall submit written notification following the initial occurrence of the excess emissions by the end of the source's next reporting period. The notification shall address the criteria set forth above.

The Affirmative Defense Provision contained in this section shall not be available to claims for injunctive relief.

The Affirmative Defense Provision does not apply to failures to meet federally promulgated performance standards or emission limits, including, but not limited to, new source performance standards and national emission standards for hazardous air pollutants. The affirmative defense provision does not apply to state implementation plan (sip) limits or permit limits that have been set taking into account potential emissions during malfunctions, including, but not necessarily limited to, certain limits with 30-day or longer averaging times, limits that indicate they apply during malfunctions, and limits that indicate they apply at all times or without exception.

e. Circumvention Clause

A person shall not build, erect, install, or use any article, machine, equipment, condition, or any contrivance, the use of which, without resulting in a reduction in the total release of air pollutants to the atmosphere, reduces or conceals an emission which would otherwise constitute a violation of this regulation. No person shall circumvent this regulation by using more openings than is considered normal practice by the industry or activity in question.

f. Compliance Certifications

For the purpose of submitting compliance certifications or establishing whether or not a person has violated or is in violation of any standard in the Colorado State Implementation Plan, nothing in the Colorado State Implementation Plan shall preclude the use, including the exclusive use, of any credible evidence or information, relevant to whether a source would have been in compliance with applicable requirements if the appropriate performance or compliance test or procedure had been performed. Evidence that has the effect of making any relevant standard or permit term more stringent shall not be credible for proving a violation of the standard or permit term.

When compliance or non-compliance is demonstrated by a test or procedure provided by permit or other applicable requirement, the owner or operator shall be presumed to be in compliance or noncompliance unless other relevant credible evidence overcomes that presumption.

g. Affirmative Defense Provision for Excess Emissions During Startup and Shutdown

An affirmative defense is provided to owners and operators for civil penalty actions for excess emissions during periods of startup and shutdown. To establish the affirmative defense and to be relieved of a civil penalty in any action to enforce an applicable requirement, the owner or operator of the facility must meet the notification requirements below in a timely manner and prove by a preponderance of the evidence that:

(i) The periods of excess emissions that occurred during startup and shutdown were short and infrequent and could not have been prevented through careful planning and design;

(ii) The excess emissions were not part of a recurring pattern indicative of inadequate design, operation or maintenance;

(iii) If the excess emissions were caused by a bypass (an intentional diversion of control equipment), then the bypass was unavoidable to prevent loss of life, personal injury, or severe property damage;

(iv) The frequency and duration of operation in startup and shutdown periods were minimized to the maximum extent practicable;

(v) All possible steps were taken to minimize the impact of excess emissions on ambient air quality;

(vi) All emissions monitoring systems were kept in operation (if at all possible);

(vii) The owner or operator's actions during the period of excess emissions were documented by properly signed, contemporaneous operating logs or other relevant evidence; and,

(viii) At all times, the facility was operated in a manner consistent with good practices for minimizing emissions. This subparagraph is intended solely to be a factor in determining whether an affirmative defense is available to an owner or operator, and shall not constitute an additional applicable requirement.

The owner or operator of the facility experiencing excess emissions during startup and shutdown shall notify the Division verbally as soon as possible, but no later than two (2) hours after the start of the next working day, and shall submit written quarterly notification following the initial occurrence of the excess emissions. The notification shall address the criteria set forth above.

The Affirmative Defense Provision contained in this section shall not be available to claims for injunctive relief.

The Affirmative Defense Provision does not apply to State Implementation Plan provisions or other requirements that derive from new source performance standards or national emissions standards for hazardous air pollutants, or any other federally enforceable performance standard or emission limit with an averaging time greater than twenty-four hours. In addition, an affirmative defense cannot be used by a single source or small group of sources where the excess emissions have the potential to cause an exceedance of the ambient air quality standards or Prevention of Significant Deterioration (PSD) increments.

In making any determination whether a source established an affirmative defense, the Division shall consider the information within the notification required above and any other information the Division deems necessary, which may include, but is not limited to, physical inspection of the facility and review of documentation pertaining to the maintenance and operation of process and air pollution control equipment.

4. Compliance Requirements

Regulation No. 3, 5 CCR 1001-5, Part C, §§ III.C.9., V.C.11. & 16.d. and § 25-7-122.1(2), C.R.S.

a. The permittee must comply with all conditions of the Operating Permit. Any permit noncompliance relating to federally-enforceable terms or conditions constitutes a violation of the federal act, as well as the state act and Regulation No. 3. Any permit noncompliance relating to state-only terms or conditions constitutes a violation of the state act and Regulation No. 3, shall be enforceable pursuant to state law, and shall not be enforceable by citizens under § 304 of the federal act. Any such violation of the federal act, the state act or regulations implementing either statute is grounds for enforcement action, for permit termination, revocation and reissuance or modification or for denial of a permit renewal application.

b. It shall not be a defense for a permittee in an enforcement action or a consideration in favor of a permittee in a permit termination, revocation or modification action or action denying a permit renewal application that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance with the conditions of the permit.

c. The permit may be modified, revoked, reopened, and reissued, or terminated for cause. The filing of any request by the permittee for a permit modification, revocation and reissuance, or termination, or any notification of planned changes or anticipated noncompliance does not stay any permit condition, except as provided in §§ X. and XI. of Regulation No. 3, Part C.

d. The permittee shall furnish to the Air Pollution Control Division, within a reasonable time as specified by the Division, any information that the Division may request in writing to determine whether cause exists for modifying, revoking and reissuing, or terminating the permit or to determine compliance with the permit. Upon request, the permittee shall also furnish to the Division copies of records required to be kept by the permittee, including information claimed to be confidential. Any information subject to a claim of confidentiality shall be specifically identified and submitted separately from information not subject to the claim.

e. Any schedule for compliance for applicable requirements with which the source is not in compliance at the time of permit issuance shall be supplemental, and shall not sanction noncompliance with, the applicable requirements on which it is based.

f. For any compliance schedule for applicable requirements with which the source is not in compliance at the time of permit issuance, the permittee shall submit, at least every 6 months unless a more frequent period is specified in the applicable requirement or by the Air Pollution Control Division, progress reports which contain the following:

   (i) dates for achieving the activities, milestones, or compliance required in the schedule for compliance, and dates when such activities, milestones, or compliance were achieved; and

   (ii) an explanation of why any dates in the schedule of compliance were not or will not be met, and any preventive or corrective measures adopted.

g. The permittee shall not knowingly falsify, tamper with, or render inaccurate any monitoring device or method required to be maintained or followed under the terms and conditions of the Operating Permit.

5. Emergency Provisions

Regulation No. 3, 5 CCR 1001-5, Part C, § VII.

An emergency means any situation arising from sudden and reasonably unforeseeable events beyond the control of the source, including acts of God, which situation requires immediate corrective action to restore normal operation, and that causes the source to exceed the technology-based emission limitation under the permit due to unavoidable increases in emissions attributable to the emergency. "Emergency" does not include noncompliance to the extent caused by improperly designed equipment, lack of preventative maintenance, careless or improper operation, or operator error. An emergency constitutes an affirmative defense to an enforcement action brought for noncompliance with a technology-based emission limitation if the permittee demonstrates, through properly signed, contemporaneous operating logs, or other relevant evidence that:

a. an emergency occurred and that the permittee can identify the cause(s) of the emergency;

b. the permitted facility was at the time being properly operated;

c. during the period of the emergency the permittee took all reasonable steps to minimize levels of emissions that exceeded the emission standards, or other requirements in the permit; and

d. the permittee submitted oral notice of the emergency to the Air Pollution Control Division no later than noon of the next working day following the emergency, and followed by written notice within one month of the time when emissions limitations were exceeded due to the emergency. This notice must contain a description of the emergency, any steps taken to mitigate emissions, and corrective actions taken.

This emergency provision is in addition to any emergency or malfunction provision contained in any applicable requirement.

6. Emission Controls for Asbestos

Regulation No. 8, 5 CCR 1001-10, Part B

The permittee shall not conduct any asbestos abatement activities except in accordance with the provisions of Regulation No. 8, Part B, "asbestos control."

7. Emissions Trading, Marketable Permits, Economic Incentives

Regulation No. 3, 5 CCR 1001-5, Part C, § V.C.13.

No permit revision shall be required under any approved economic incentives, marketable permits, emissions trading and other similar programs or processes for changes that are specifically provided for in the permit.

8. Fee Payment

C.R.S. §§ 25-7-114.1(6) and 25-7-114.7

a. The permittee shall pay an annual emissions fee in accordance with the provisions of § 25-7-114.7. A 1% per month late payment fee shall be assessed against any invoice amounts not paid in full on the 91st day after the date of invoice, unless a permittee has filed a timely protest to the invoice amount.

b. The permittee shall pay a permit processing fee in accordance with the provisions of § 25-7-114.7. If the Division estimates that processing of the permit will take more than 30 hours, it will notify the permittee of its estimate of what the actual charges may be prior to commencing any work exceeding the 30 hour limit.

c. The permittee shall pay an APEN fee in accordance with the provisions of § 25-7-114.1(6) for each APEN or revised APEN filed.

9. Fugitive Particulate Emissions

Regulation No. 1, 5 CCR 1001-3, § III.D.1.

The permittee shall employ such control measures and operating procedures as are necessary to minimize fugitive particulate emissions into the atmosphere, in accordance with the provisions of Regulation No. 1, § III.D.1.

10. Inspection and Entry

Regulation No. 3, 5 CCR 1001-5, Part C, § V.C.16.b.

Upon presentation of credentials and other documents as may be required by law, the permittee shall allow the Air Pollution Control Division, or any authorized representative, to perform the following:

a. enter upon the permittee's premises where an Operating Permit source is located, or emissions-related activity is conducted, or where records must be kept under the terms of the permit;

b. have access to, and copy, at reasonable times, any records that must be kept under the conditions of the permit;

c. inspect at reasonable times any facilities, equipment (including monitoring and air pollution control equipment), practices, or operations regulated or required under the Operating Permit;

d. sample or monitor at reasonable times, for the purposes of assuring compliance with the Operating Permit or applicable requirements, any substances or parameters.

11. Minor Permit Modifications

Regulation No. 3, 5 CCR 1001-5, Part C, §§ X. & XI.

The permittee shall submit an application for a minor permit modification before making the change requested in the application. The permit shield shall not extend to minor permit modifications.

12. New Source Review

Regulation No. 3, 5 CCR 1001-5, Part B

The permittee shall not commence construction or modification of a source required to be reviewed under the New Source Review provisions of Regulation No. 3, Part B, without first receiving a construction permit.

13. No Property Rights Conveyed

Regulation No. 3, 5 CCR 1001-5, Part C, § V.C.11.d.

This permit does not convey any property rights of any sort, or any exclusive privilege.

14. Odor

Regulation No. 2, 5 CCR 1001-4, Part A

As a matter of state law only, the permittee shall comply with the provisions of Regulation No. 2 concerning odorous emissions.

15. Off-Permit Changes to the Source

Regulation No. 3, 5 CCR 1001-5, Part C, § XII.B.

The permittee shall record any off-permit change to the source that causes the emissions of a regulated pollutant subject to an applicable requirement, but not otherwise regulated under the permit, and the emissions resulting from the change, including any other data necessary to show compliance with applicable ambient air quality standards. The permittee shall provide contemporaneous notification to the Air Pollution Control Division and to the Environmental Protection Agency at the addresses listed in Appendix D of this Permit . The permit shield shall not apply to any off-permit change.

16. Opacity

Regulation No. 1, 5 CCR 1001-3, §§ I., II.

The permittee shall comply with the opacity emissions limitation set forth in Regulation No. 1, §§ I.-II.

17. Open Burning

Regulation No. 9, 5 CCR 1001-11

The permittee shall obtain a permit from the Division for any regulated open burning activities in accordance with provisions of Regulation No. 9.

18. Ozone Depleting Compounds

Regulation No. 15, 5 CCR 1001-17

The permittee shall comply with the provisions of Regulation No. 15 concerning emissions of ozone depleting compounds. Sections I., II.C., II.D., III. IV., and V. of Regulation No. 15 shall be enforced as a matter of state law only.

19. Permit Expiration and Renewal

Regulation No. 3, 5 CCR 1001-5, Part C, §§ III.B.6., IV.C., V.C.2.

a. The permit term shall be five (5) years. The permit shall expire at the end of its term. Permit expiration terminates the permittee's right to operate unless a timely and complete renewal application is submitted.

b. Applications for renewal shall be submitted at least twelve months, but not more than 18 months, prior to the expiration of the Operating Permit. An application for permit renewal may address only those portions of the permit that require revision, supplementing, or deletion, incorporating the remaining permit terms by reference from the previous permit. A copy of any materials incorporated by reference must be included with the application.

20. Portable Sources

Regulation No. 3, 5 CCR 1001-5, Part C, § II.D.

Portable Source permittees shall notify the Air Pollution Control Division at least 10 days in advance of each change in location.

21. Prompt Deviation Reporting

Regulation No. 3, 5 CCR 1001-5, Part C, § V.C.7.b.

The permittee shall promptly report any deviation from permit requirements, including those attributable to malfunction conditions as defined in the permit, the probable cause of such deviations, and any corrective actions or preventive measures taken.

"Prompt" is defined as follows:

a. Any definition of "prompt" or a specific timeframe for reporting deviations provided in an underlying applicable requirement as identified in this permit; or

b. Where the underlying applicable requirement fails to address the time frame for reporting deviations, reports of deviations will be submitted based on the following schedule:

(i) For emissions of a hazardous air pollutant or a toxic air pollutant (as identified in the applicable regulation) that continue for more than an hour in excess of permit requirements, the report shall be made within 24 hours of the occurrence;

(ii) For emissions of any regulated air pollutant, excluding a hazardous air pollutant or a toxic air pollutant that continue for more than two hours in excess of permit requirements, the report shall be made within 48 hours; and

(iii) For all other deviations from permit requirements, the report shall be submitted every six (6) months, except as otherwise specified by the Division in the permit in accordance with paragraph 22.d. below.

c. If any of the conditions in paragraphs b.i or b.ii above are met, the source shall notify the Division by telephone (303-692-3155) or facsimile (303-782-0278) based on the timetables listed above. *[Explanatory note: Notification by telephone or facsimile must specify that this notification is a deviation report for an Operating Permit.]* A written notice, certified consistent with General Condition 2.a. above (Certification Requirements), shall be submitted within 10 working days of the occurrence. All deviations reported under this section shall also be identified in the 6-month report required above.

"Prompt reporting" does not constitute an exception to the requirements of "Emergency Provisions" for the purpose of avoiding enforcement actions.

22. Record Keeping and Reporting Requirements

Regulation No. 3, 5 CCR 1001-5, Part A, § II.; Part C, §§ V.C.6., V.C.7.

a. Unless otherwise provided in the source specific conditions of this Operating Permit, the permittee shall maintain compliance monitoring records that include the following information:

(i) date, place as defined in the Operating Permit, and time of sampling or measurements;

(ii) date(s) on which analyses were performed;

(iii) the company or entity that performed the analysis;

(iv) the analytical techniques or methods used;

(v) the results of such analysis; and

(vi) the operating conditions at the time of sampling or measurement.

b. The permittee shall retain records of all required monitoring data and support information for a period of at least five (5) years from the date of the monitoring sample, measurement, report or application. Support information, for this purpose, includes all calibration and maintenance records and all original strip-chart recordings for continuous monitoring instrumentation, and copies of all reports required by the Operating Permit. With prior approval of the Air Pollution Control Division, the permittee may maintain any of the above records in a computerized form.

c. Permittees must retain records of all required monitoring data and support information for the most recent twelve (12) month period, as well as compliance certifications for the past five (5) years on-site at all times. A permittee

shall make available for the Air Pollution Control Division's review all other records of required monitoring data and support information required to be retained by the permittee upon 48 hours advance notice by the Division.

d. The permittee shall submit to the Air Pollution Control Division all reports of any required monitoring at least every six (6) months, unless an applicable requirement, the compliance assurance monitoring rule, or the Division requires submission on a more frequent basis. All instances of deviations from any permit requirements must be clearly identified in such reports.

e. The permittee shall file an Air Pollutant Emissions Notice ("APEN") prior to constructing, modifying, or altering any facility, process, activity which constitutes a stationary source from which air pollutants are or are to be emitted, unless such source is exempt from the APEN filing requirements of Regulation No. 3, Part A, § II.D. A revised APEN shall be filed annually whenever a significant change in emissions, as defined in Regulation No. 3, Part A, § II.C.2., occurs; whenever there is a change in owner or operator of any facility, process, or activity; whenever new control equipment is installed; whenever a different type of control equipment replaces an existing type of control equipment; whenever a permit limitation must be modified; or before the APEN expires. An APEN is valid for a period of five years. The five-year period recommences when a revised APEN is received by the Air Pollution Control Division. Revised APENs shall be submitted no later than 30 days before the five-year term expires. Permittees submitting revised APENs to inform the Division of a change in actual emission rates must do so by April 30 of the following year. Where a permit revision is required, the revised APEN must be filed along with a request for permit revision. APENs for changes in control equipment must be submitted before the change occurs. Annual fees are based on the most recent APEN on file with the Division.

23. Reopenings for Cause

Regulation No. 3, 5 CCR 1001-5, Part C, § XIII.

a. The Air Pollution Control Division shall reopen, revise, and reissue Operating Permits; permit reopenings and reissuance shall be processed using the procedures set forth in Regulation No. 3, Part C, § III., except that proceedings to reopen and reissue permits affect only those parts of the permit for which cause to reopen exists.

b. The Division shall reopen a permit whenever additional applicable requirements become applicable to a major source with a remaining permit term of three or more years, unless the effective date of the requirements is later than the date on which the permit expires, or unless a general permit is obtained to address the new requirements; whenever additional requirements (including excess emissions requirements) become applicable to an affected source under the acid rain program; whenever the Division determines the permit contains a material mistake or that inaccurate statements were made in establishing the emissions standards or other terms or conditions of the permit; or whenever the Division determines that the permit must be revised or revoked to assure compliance with an applicable requirement.

c. The Division shall provide 30 days' advance notice to the permittee of its intent to reopen the permit, except that a shorter notice may be provided in the case of an emergency.

d. The permit shield shall extend to those parts of the permit that have been changed pursuant to the reopening and reissuance procedure.

24. Section 502(b)(10) Changes

Regulation No. 3, 5 CCR 1001-5, Part C, § XII.A.

The permittee shall provide a minimum 7-day advance notification to the Air Pollution Control Division and to the Environmental Protection Agency at the addresses listed in Appendix D of this Permit. The permittee shall attach a copy of each such notice given to its Operating Permit.

25. Severability Clause

Regulation No. 3, 5 CCR 1001-5, Part C, § V.C.10.

In the event of a challenge to any portion of the permit, all emissions limits, specific and general conditions, monitoring, record keeping and reporting requirements of the permit, except those being challenged, remain valid and enforceable.

26. Significant Permit Modifications

Regulation No. 3, 5 CCR 1001-5, Part C, § III.B.2.

The permittee shall not make a significant modification required to be reviewed under Regulation No. 3, Part B ("Construction Permit" requirements) without first receiving a construction permit. The permittee shall submit a complete Operating Permit application or application for an Operating Permit revision for any new or modified source within twelve months of commencing operation, to the address listed in Item 1 in Appendix D of this permit. If the permittee chooses to use the "Combined Construction/Operating Permit" application procedures of Regulation No. 3, Part C, then the Operating Permit must be received prior to commencing construction of the new or modified source.

27. Special Provisions Concerning the Acid Rain Program

Regulation No. 3, 5 CCR 1001-5, Part C, §§ V.C.1.b. & 8

a. Where an applicable requirement of the federal act is more stringent than an applicable requirement of regulations promulgated under Title IV of the federal act, 40 Code of Federal Regulations (CFR) Part 72, both provisions shall be incorporated into the permit and shall be federally enforceable.

b. Emissions exceeding any allowances that the source lawfully holds under Title IV of the federal act or the regulations promulgated thereunder, 40 CFR Part 72, are expressly prohibited.

28. Transfer or Assignment of Ownership

Regulation No. 3, 5 CCR 1001-5, Part C, § II.C.

No transfer or assignment of ownership of the Operating Permit source will be effective unless the prospective owner or operator applies to the Air Pollution Control Division on Division-supplied Administrative Permit Amendment forms, for reissuance of the existing Operating Permit. No administrative permit shall be complete until a written agreement containing a specific date for transfer of permit, responsibility, coverage, and liability between the permittee and the prospective owner or operator has been submitted to the Division.

29. Volatile Organic Compounds

Regulation No. 7, 5 CCR 1001-9, §§ III & V.

The requirements in paragraphs a, b and e apply to sources located in an ozone non-attainment area or the Denver 1-hour ozone attainment/maintenance area. The requirements in paragraphs c and d apply statewide.

a. All storage tank gauging devices, anti-rotation devices, accesses, seals, hatches, roof drainage systems, support structures, and pressure relief valves shall be maintained and operated to prevent detectable vapor loss except when opened, actuated, or used for necessary and proper activities (e.g. maintenance). Such opening, actuation, or use shall be limited so as to minimize vapor loss.

   Detectable vapor loss shall be determined visually, by touch, by presence of odor, or using a portable hydrocarbon analyzer. When an analyzer is used, detectable vapor loss means a VOC concentration exceeding 10,000 ppm. Testing shall be conducted as in Regulation No. 7, Section VIII.C.3.

b. Except when otherwise provided by Regulation No. 7, all volatile organic compounds, excluding petroleum liquids, transferred to any tank, container, or vehicle compartment with a capacity exceeding 212 liters (56 gallons), shall be transferred using submerged or bottom filling equipment. For top loading, the fill tube shall reach within six inches of the bottom of the tank compartment. For bottom-fill operations, the inlet shall be flush with the tank bottom.

c. The permittee shall not dispose of volatile organic compounds by evaporation or spillage unless Reasonably Available Control Technology (RACT) is utilized.

d. No owner or operator of a bulk gasoline terminal, bulk gasoline plant, or gasoline dispensing facility as defined in Colorado Regulation No. 7, Section VI, shall permit gasoline to be intentionally spilled, discarded in sewers, stored in open containers, or disposed of in any other manner that would result in evaporation.

e. Beer production and associated beer container storage and transfer operations involving volatile organic compounds with a true vapor pressure of less than 1.5 PSIA actual conditions are exempt from the provisions of paragraph b, above.

30. Wood Stoves and Wood burning Appliances

Regulation No. 4, 5 CCR 1001-6

The permittee shall comply with the provisions of Regulation No. 4 concerning the advertisement, sale, installation, and use of wood stoves and wood burning appliances.

OPERATING PERMIT APPENDICES

A - INSPECTION INFORMATION
B - MONITORING AND PERMIT DEVIATION REPORT
C - COMPLIANCE CERTIFICATION REPORT
D - NOTIFICATION ADDRESSES
E - PERMIT ACRONYMS
F - PERMIT MODIFICATIONS

*DISCLAIMER:

None of the information found in these Appendices shall be considered to be State or Federally enforceable, except as otherwise provided in the permit, and is presented to assist the source, permitting authority, inspectors, and citizens.

APPENDIX A - Inspection Information

Directions to Plant:

This facility is located at 6300 Diagonal Highway. The facility is located at the intersection of State Highway 52 and Diagonal Highway 119, on the west side of Highway 119.

Safety Equipment Required:

Eye Protection
Safety Shoes
Hearing Protection
Hard Hat

Facility Plot Plan:

Figure 1 (following page) shows the plot plan as submitted on September 18, 2012 to support the November 22, 2011 Title V renewal application.

List of Insignificant Activities:

The following list of insignificant activities was provided by the source to assist in the understanding of the facility layout. Since there is no requirement to update such a list, activities may have changed since the last filing.

The asterisk (*) denotes an insignificant activity source category based on the size of the activity, emissions levels from the activity or the production rate of the activity. The owner or operator of individual emission points in insignificant activity source categories marked with an asterisk (*) must maintain sufficient record keeping verifying that the exemption applies. Such records shall be made available for Division review upon request. (Colorado Regulation No. 3, Part C, Section II.E)

Units with emissions less than APEN de minimis - criteria pollutants (Reg 3 Part C.II.E.3.a)*

Building 009 Cooling Towers (PM and PM_{10} less than 1 tpy)
Building 020E Cooling Towers (PM and PM_{10} less than 1 tpy)
Building 020W Cooling Towers (PM and PM_{10} less than 1 tpy)
Sand Pile for Street Sanding (PM and PM_{10} less than 1 tpy)
Foam Packaging Booth (VOC less than 1 tpy)
Lab Hoods (VOC less than 1 tpy)

Chemical storage tanks or containers < 500 gal (Reg 3 Part C.II.E.3.n)*

Chemical Storage and Dispensing Hood

Emissions of air pollutants which are not criteria or non-criteria reportable pollutants (Reg 3 Part C.II.E.3.oo)

Various Water Condensate Storage Tank

Storage tanks with annual throughput less than 400,000 gal/yr and meeting content specifications (Reg 3 Part C.II.E.3.fff)*

Diesel Storage Tanks at Following Locations and Size:

Building 002 (256 gal)
Building 003, five (5) (1,000 gal)
Building 004 (58 gal)
Building 005, two (2) (30,145 gal)
Building 008 (216 gal)
Building 009W, three (3) (823 gal)
Building 009W, three (3) (997 gal)
Building 009N, three (3) (1,000 gal)
Building 011 (503 gal)
Building 014 (320 gal)
Building 016B (5,087 gal)
Building 016C (204 gal)
Building 017N (304 gal)
Building 020N four (4) (401 gal)
Building 020SE (1050 gal)
Building 020W, three (3) (1,197 gal)
Building 020W, two (2) (1,000 gal)
Building 021A (75 gal)
Building 021 (87 gal)
Building 022 (337 gal)
Building 025 (220 gal)
Building 025E (5,087 gal)
Building 012E, two (2) (34,826 gal)
Building 020E, two (2) (34,826 gal)

Sandblast equipment where blast media is recycled and blasted material is collected (Reg 3 Part C.II.E.3.www)

Sandblasting

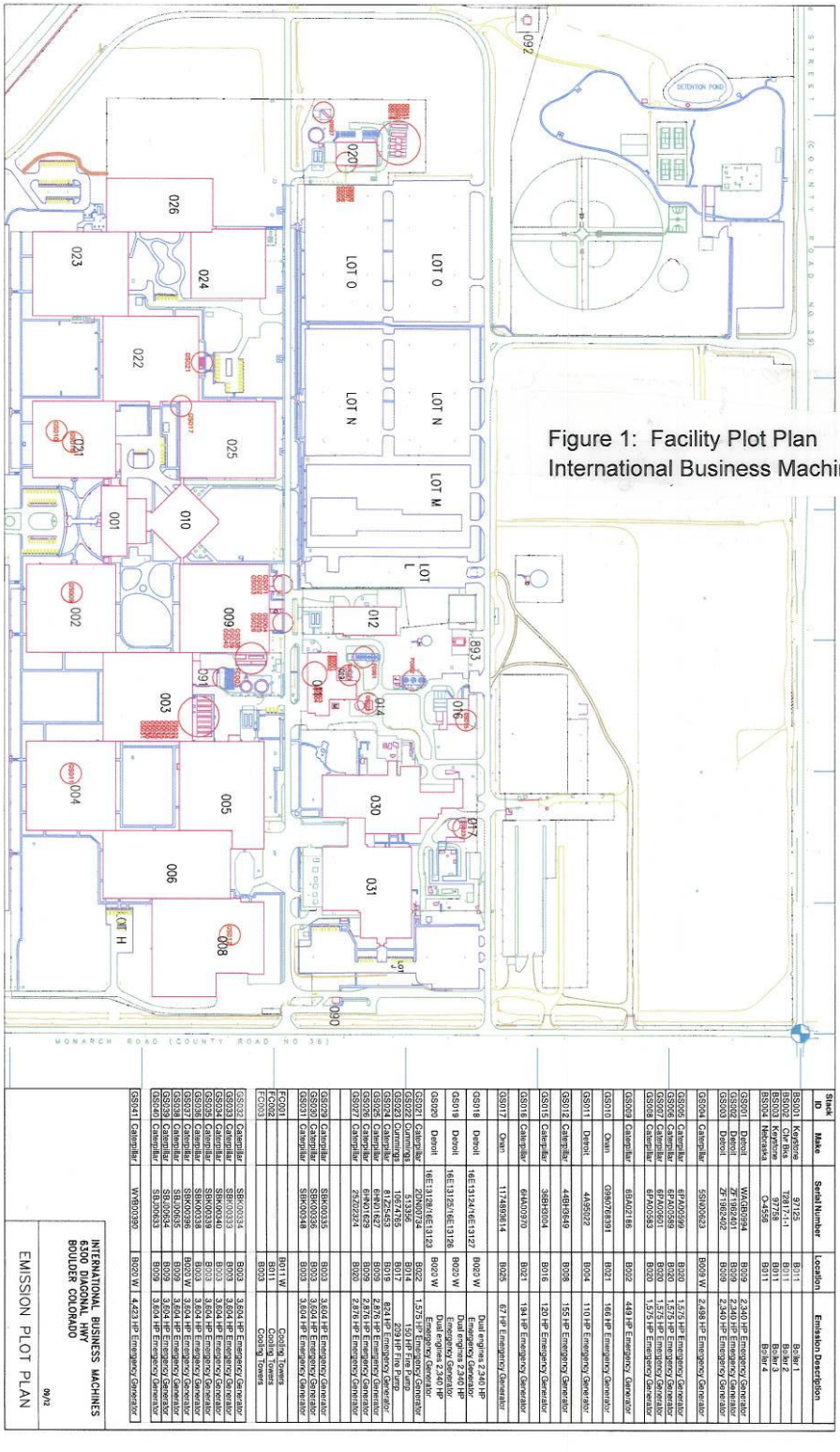

Figure 1: Facility Plot Plan
International Business Machines

Stack ID	Make	Serial Number	Location	Emission Description
BS001	Keystone	97125	B011	Boiler 1
BS002	Cbr Bks	T2817J-1	B011	Boiler 2
BS003	Keystone	97758	B011	Boiler 3
BS004	Mckenzie	O-4358	B011	Boiler 4
GS001	Detroit	WA/GB0994	B009	2,340 HP Emergency Generator
GS002	Detroit	ZF11962401	B009	2,340 HP Emergency Generator
GS003	Detroit	ZF11962402	B009	2,340 HP Emergency Generator
GS004	Caterpillar	SBN00623	B009 W	2,498 HP Emergency Generator
GS005	Caterpillar	6PA00599	B020	1,675 HP Emergency Generator
GS006	Caterpillar	6PA00589	B020	1,675 HP Emergency Generator
GS007	Caterpillar	6PA00583	B020	1,675 HP Emergency Generator
GS008	Caterpillar	6PA00583	B020	1,675 HP Emergency Generator
GS009	Caterpillar	6PA02186	B002	449 HP Emergency Generator
GS010	Onan	G980768391	B021	166 HP Emergency Generator
GS011	Detroit	4495022	B004	110 HP Emergency Generator
GS012	Caterpillar	4BH18449	B008	155 HP Emergency Generator
GS015	Caterpillar	38BH38004	B016	120 HP Emergency Generator
GS016	Caterpillar	6HA00970	B021	194 HP Emergency Generator
GS017	Onan	1174B9614	B025	67 HP Emergency Generator
GS018	Detroit	16E13124/16E13127	B020 W	Dual engines 2,340 HP Emergency Generator
GS019	Detroit	16E13125/16E13128	B020 W	Dual engines 2,340 HP Emergency Generator
GS020	Detroit	16E13128/16E13123	B020 W	Dual engines 2,340 HP Emergency Generator
GS021	Caterpillar	2DN00724	B022	1,675 HP Emergency Generator
GS022	Cummins	31339S	B014	190 HP Fire Pump
GS023	Caterpillar	81J25453	B019	824 HP Emergency Generator
GS024	Caterpillar	6HN01627	B009	2,876 HP Emergency Generator
GS026	Caterpillar	6HN01629	B009	2,876 HP Emergency Generator
GS027	Caterpillar	2SA02274	B020	2,876 HP Emergency Generator
FC001			B011 W	Cooling Towers
FC002			B011	Cooling Towers
FC003			B003	Cooling Towers
GS029	Caterpillar	SBK00335	B003	3,604 HP Emergency Generator
GS030	Caterpillar	SBK00336	B003	3,604 HP Emergency Generator
GS031	Caterpillar	SBK00348	B003	3,604 HP Emergency Generator
GS032	Caterpillar	SBK00334	B003	3,604 HP Emergency Generator
GS033	Caterpillar	SBK00333	B003	3,604 HP Emergency Generator
GS034	Caterpillar	SBK00340	B003	3,604 HP Emergency Generator
GS035	Caterpillar	SBK00339	B003	3,604 HP Emergency Generator
GS036	Caterpillar	SBK00338	B003	3,604 HP Emergency Generator
GS037	Caterpillar	SBK00337	B003	3,604 HP Emergency Generator
GS038	Caterpillar	SBJ00835	B009 W	3,604 HP Emergency Generator
GS039	Caterpillar	SBJ00834	B009	3,604 HP Emergency Generator
GS040	Caterpillar	SBJ00833	B009	3,604 HP Emergency Generator
GS041	Caterpillar	WYB01380	B020 W	4,423 HP Emergency Generator

APPENDIX B

Reporting Requirements and Definitions

with codes ver 2/20/07

Please note that, pursuant to 113(c)(2) of the federal Clean Air Act, any person who knowingly:

(A) makes any false material statement, representation, or certification in, or omits material information from, or knowingly alters, conceals, or fails to file or maintain any notice, application, record, report, plan, or other document required pursuant to the Act to be either filed or maintained (whether with respect to the requirements imposed by the Administrator or by a State);

(B) fails to notify or report as required under the Act; or

(C) falsifies, tampers with, renders inaccurate, or fails to install any monitoring device or method required to be maintained or followed under the Act shall, upon conviction, be punished by a fine pursuant to title 18 of the United States Code, or by imprisonment for not more than 2 years, or both. If a conviction of any person under this paragraph is for a violation committed after a first conviction of such person under this paragraph, the maximum punishment shall be doubled with respect to both the fine and imprisonment.

The permittee must comply with all conditions of this operating permit. Any permit noncompliance constitutes a violation of the Act and is grounds for enforcement action; for permit termination, revocation and reissuance, or modification; or for denial of a permit renewal application.

The Part 70 Operating Permit program requires three types of reports to be filed for all permits.
All required reports must be certified by a responsible official.

Report #1: Monitoring Deviation Report (due at least every six months)

For purposes of this operating permit, the Division is requiring that the monitoring reports are due every six months unless otherwise noted in the permit. All instances of deviations from permit monitoring requirements must be clearly identified in such reports.

For purposes of this operating permit, monitoring means any condition determined by observation, by data from any monitoring protocol, or by any other monitoring which is required by the permit as well as the recordkeeping associated with that monitoring. This would include, for example, fuel use or process rate monitoring, fuel analyses, and operational or control device parameter monitoring.

Report #2: Permit Deviation Report (must be reported "promptly")

In addition to the monitoring requirements set forth in the permits as discussed above, each and every requirement of the permit is subject to deviation reporting. The reports must address deviations from permit requirements, including those attributable to malfunctions as defined in this Appendix, the probable cause of

such deviations, and any corrective actions or preventive measures taken. All deviations from any term or condition of the permit are required to be summarized or referenced in the annual compliance certification.

For purposes of this operating permit, "malfunction" shall refer to both emergency conditions and malfunctions. Additional discussion on these conditions is provided later in this Appendix.

For purposes of this operating permit, the Division is requiring that the permit deviation reports are due as set forth in General Condition 21. Where the underlying applicable requirement contains a definition of prompt or otherwise specifies a time frame for reporting deviations, that definition or time frame shall govern. For example, quarterly Excess Emission Reports required by an NSPS or Regulation No. 1, Section IV.

In addition to the monitoring deviations discussed above, included in the meaning of deviation for the purposes of this operating permit are any of the following:

(1) A situation where emissions exceed an emission limitation or standard contained in the permit;

(2) A situation where process or control device parameter values demonstrate that an emission limitation or standard contained in the permit has not been met;

(3) A situation in which observations or data collected demonstrates noncompliance with an emission limitation or standard or any work practice or operating condition required by the permit; or,

(4) A situation in which an excursion or exceedance as defined in 40CFR Part 64 (the Compliance Assurance Monitoring (CAM) Rule) has occurred. (only if the emission point is subject to CAM)

For reporting purposes, the Division has combined the Monitoring Deviation Report with the Permit Deviation Report. All deviations shall be reported using the following codes:

1 = Standard:	When the requirement is an emission limit or standard
2 = Process:	When the requirement is a production/process limit
3 = Monitor:	When the requirement is monitoring
4 = Test:	When the requirement is testing
5 = Maintenance:	When required maintenance is not performed
6 = Record:	When the requirement is recordkeeping
7 = Report:	When the requirement is reporting
8 = CAM:	A situation in which an excursion or exceedance as defined in 40CFR Part 64 (the Compliance Assurance Monitoring (CAM) Rule) has occurred.
9 = Other:	When the deviation is not covered by any of the above categories

Report #3: Compliance Certification (annually, as defined in the permit)

Submission of compliance certifications with terms and conditions in the permit, including emission limitations, standards, or work practices, is required not less than annually.

Compliance Certifications are intended to state the compliance status of each requirement of the permit over the certification period. They must be based, at a minimum, on the testing and monitoring methods specified in the

permit that were conducted during the relevant time period. In addition, if the owner or operator knows of other material information (i.e. information beyond required monitoring that has been specifically assessed in relation to how the information potentially affects compliance status), that information must be identified and addressed in the compliance certification. The compliance certification must include the following:

- The identification of each term or condition of the permit that is the basis of the certification;
- Whether or not the method(s) used by the owner or operator for determining the compliance status with each permit term and condition during the certification period was the method(s) specified in the permit. Such methods and other means shall include, at a minimum, the methods and means required in the permit. If necessary, the owner or operator also shall identify any other material information that must be included in the certification to comply with section 113(c)(2) of the Federal Clean Air Act, which prohibits knowingly making a false certification or omitting material information;
- The status of compliance with the terms and conditions of the permit, and whether compliance was continuous or intermittent. The certification shall identify each deviation and take it into account in the compliance certification. Note that not all deviations are considered violations.[1]
- Such other facts as the Division may require, consistent with the applicable requirements to which the source is subject, to determine the compliance status of the source.

The Certification shall also identify as possible exceptions to compliance any periods during which compliance is required and in which an excursion or exceedance as defined under 40 CFR Part 64 (the Compliance Assurance Monitoring (CAM) Rule) has occurred. (only for emission points subject to CAM)

Note the requirement that the certification shall identify each deviation and take it into account in the compliance certification. Previously submitted deviation reports, including the deviation report submitted at the time of the annual certification, may be referenced in the compliance certification.

Startup, Shutdown, Malfunctions and Emergencies

Understanding the application of Startup, Shutdown, Malfunctions and Emergency Provisions, is very important in both the deviation reports and the annual compliance certifications.

Startup, Shutdown, and Malfunctions

Please note that exceedances of some New Source Performance Standards (NSPS) and Maximum Achievable Control Technology (MACT) standards that occur during Startup, Shutdown or Malfunctions may not be considered to be non-compliance since emission limits or standards often do not apply unless specifically stated in the NSPS. Such exceedances must, however, be reported as excess emissions per the NSPS/MACT rules and would still be noted in the deviation report. In regard to compliance certifications, the permittee should be

[1] For example, given the various emissions limitations and monitoring requirements to which a source may be subject, a deviation from one requirement may not be a deviation under another requirement which recognizes an exception and/or special circumstances relating to that same event.

confident of the information related to those deviations when making compliance determinations since they are subject to Division review. The concepts of Startup, Shutdown and Malfunctions also exist for Best Available Control Technology (BACT) sources, but are not applied in the same fashion as for NSPS and MACT sources.

Emergency Provisions

Under the Emergency provisions of Part 70 certain operational conditions may act as an affirmative defense against enforcement action if they are properly reported.

DEFINITIONS

Malfunction (NSPS) means any sudden, infrequent, and not reasonably preventable failure of air pollution control equipment, process equipment, or a process to operate in a normal or usual manner. Failures that are caused in part by poor maintenance or careless operation are not malfunctions.

Malfunction (SIP) means any sudden and unavoidable failure of air pollution control equipment or process equipment or unintended failure of a process to operate in a normal or usual manner. Failures that are primarily caused by poor maintenance, careless operation, or any other preventable upset condition or preventable equipment breakdown shall not be considered malfunctions.

Emergency means any situation arising from sudden and reasonably unforeseeable events beyond the control of the source, including acts of God, which situation requires immediate corrective action to restore normal operation, and that causes the source to exceed a technology-based emission limitation under the permit, due to unavoidable increases in emissions attributable to the emergency. An emergency shall not include noncompliance to the extent caused by improperly designed equipment, lack of preventative maintenance, careless or improper operation, or operator error.

Monitoring and Permit Deviation Report - Part I

1. Following is the **required** format for the Monitoring and Permit Deviation report to be submitted to the Division as set forth in General Condition 21. The Table below must be completed for all equipment or processes for which specific Operating Permit terms exist.

2. Part II of this Appendix B shows the format and information the Division will require for describing periods of monitoring and permit deviations, or malfunction or emergency conditions as indicated in the Table below. One Part II Form must be completed for each Deviation. Previously submitted reports (e.g. EER's or malfunctions) may be referenced and the form need not be filled out in its entirety.

FACILITY NAME: International Business Machines (IBM)
OPERATING PERMIT NO: 99OPBO223
REPORTING PERIOD:_____ (see first page of the permit for specific reporting period and dates

Operating Permit Unit ID	Unit Description	Deviations Noted During Period?[1]		Deviation Code[2]	Malfunction/ Emergency Condition Reported During Period?	
		YES	NO		YES	NO
G001 thru G012 & G015 thru G023	Nineteen (19) Emergency Generators and Two (2) Fire-Water Pumps. All Diesel Fuel Fired. Detailed List in Section I, Condition 6.2 of this Permit					
G024 thru G027 & G029 thru G031	Seven (7) Emergency Generators. All Diesel Fuel Fired. Detailed List in Section I, Condition 6.3 of this Permit.					
B001 & B003	Two (2) Keystone Boilers, 17228/97125 and 17619/97758, rated at 60and 66 MMBtu/hr, Respectively. Each Natural Gas Fired with Diesel and/or Jet Fuel as Backup.					
B004	Nebraska Type O Boiler, Model No. NOS-2A-58, Serial No. O-4556, rated at 54.4 MMBtu/hr. Natural Gas Fired with Diesel and/or Jet Fuel as Backup.					
C001, C002 and C003	Building 011W Cooling Tower, Building 011 Cooling Tower and Building 003 Cooling Tower					
G032 thru G040	Nine (9) Emergency Generators. All Diesel Fuel Fired. Detailed List in Section I, Condition 6.4 of this Permit.					
G041	One (1) Caterpillar, Model No. C175-16, Diesel Fired Emergency Generator Set, Rated at 4,423 hp (maximum) and 29.2 MMBtu/hr (213.2 gal/hr). Serial No. WYB00390.					
B002	One (1) Cleaver Brooks Boiler, Model No. 4WG-LN, Serial No. T2817-1-1, Rated at 32.66 MMBtu/hr. This boiler burns natural gas as a primary fuel with distillate oil used as a back-up fuel.					

Operating Permit Unit ID	Unit Description	Deviations Noted During Period?[1]		Deviation Code[2]	Malfunction/ Emergency Condition Reported During Period?	
		YES	NO		YES	NO
	General Conditions					
	Insignificant Activities					

[1] See previous discussion regarding what is considered to be a deviation. Determination of whether or not a deviation has occurred shall be based on a reasonable inquiry using readily available information.

[2]Use the following entries as appropriate:

1 = Standard: When the requirement is an emission limit or standard
2 = Process: When the requirement is a production/process limit
3 = Monitor: When the requirement is monitoring
4 = Test: When the requirement is testing
5 = Maintenance: When required maintenance is not performed
6 = Record: When the requirement is recordkeeping
7 = Report: When the requirement is reporting
8 = CAM: A situation in which an excursion or exceedance as defined in 40 CFR Part 64 (the Compliance Assurance Monitoring (CAM) Rule) has occurred.
9 = Other: When the deviation is not covered by any of the above categories

Monitoring and Permit Deviation Report - Part II

FACILITY NAME: International Business Machines (IBM)
OPERATING PERMIT NO: 99OPBO223
REPORTING PERIOD:

Is the deviation being claimed as an: Emergency _____ Malfunction_____ N/A

(For NSPS/MACT) Did the deviation occur during: Startup _____ Shutdown _____ Malfunction _____
Normal Operation _____

OPERATING PERMIT UNIT IDENTIFICATION:

Operating Permit Condition Number Citation

Explanation of Period of Deviation

Duration (start/stop date & time)

Action Taken to Correct the Problem

Measures Taken to Prevent a Reoccurrence of the Problem

Dates of Malfunctions/Emergencies Reported (if applicable)

Deviation Code _____ Division Code QA: _____

SEE EXAMPLE ON THE NEXT PAGE

EXAMPLE

FACILITY NAME: Acme Corp.
OPERATING PERMIT NO: 96OPZZXXX
REPORTING PERIOD: 1/1/04 - 6/30/06

Is the deviation being claimed as an: Emergency _____ Malfunction __XX____ N/A

(For NSPS/MACT) Did the deviation occur during: Startup _____ Shutdown _____ Malfunction
Normal Operation _____

OPERATING PERMIT UNIT IDENTIFICATION:

Asphalt Plant with a Scrubber for Particulate Control - Unit XXX

Operating Permit Condition Number Citation

Section II, Condition 3.1 - Opacity Limitation

Explanation of Period of Deviation

Slurry Line Feed Plugged

Duration

START- 1730 4/10/06
END- 1800 4/10/06

Action Taken to Correct the Problem

Line Blown Out

Measures Taken to Prevent Reoccurrence of the Problem

Replaced Line Filter

Dates of Malfunction/Emergencies Reported (if applicable)

5/30/06 to A. Einstein, APCD

Deviation Code _____ Division Code QA: _____

Monitoring and Permit Deviation Report - Part III

REPORT CERTIFICATION

SOURCE NAME: International Business Machines (IBM)

FACILITY IDENTIFICATION NUMBER: 0130006

PERMIT NUMBER: 99OPBO223

REPORTING PERIOD:_____ (see first page of the permit for specific reporting period and dates)

All information for the Title V Semi-Annual Deviation Reports must be certified by a responsible official as defined in Colorado Regulation No. 3, Part A, Section I.B.38. This signed certification document must be packaged with the documents being submitted.

STATEMENT OF COMPLETENESS

I have reviewed the information being submitted in its entirety and, based on information and belief formed after reasonable inquiry, I certify that the statements and information contained in this submittal are true, accurate and complete.

Please note that the Colorado Statutes state that any person who knowingly, as defined in Sub-Section 18-1-501(6), C.R.S., makes any false material statement, representation, or certification in this document is guilty of a misdemeanor and may be punished in accordance with the provisions of Sub-Section 25-7 122.1, C.R.S.

Printed or Typed Name Title

Signature of Responsible Official Date Signed

Note: Deviation reports shall be submitted to the Division at the address given in Appendix D of this permit. No copies need be sent to the U.S. EPA.

APPENDIX C

Format for Annual Compliance Certification Reports

Following is the format for the Compliance Certification report to be submitted to the Division and the U.S. EPA annually based on the effective date of the permit. The Table below must be completed for all equipment or processes for which specific Operating Permit terms exist.

FACILITY NAME: International Business Machines (IBM)

OPERATING PERMIT NO: 99OPBO223
REPORTING PERIOD:

I. Facility Status

___ During the entire reporting period, this source was in compliance with **ALL** terms and conditions contained in the Permit, each term and condition of which is identified and included by this reference. The method(s) used to determine compliance is/are the method(s) specified in the Permit.

___ With the possible exception of the deviations identified in the table below, this source was in compliance with all terms and conditions contained in the Permit, each term and condition of which is identified and included by this reference, during the entire reporting period. The method used to determine compliance for each term and condition is the method specified in the Permit, unless otherwise indicated and described in the deviation report(s). Note that not all deviations are considered violations.

Operating Permit Unit ID	Unit Description	Deviations Reported [1]		Monitoring Method per Permit?[2]		Was Compliance - Continuous or Intermittent?[3]	
		Previous	Current	YES	NO	Continuous	Intermittent
G001 thru G012 & G015 thru G023	Nineteen (19) Emergency Generators and Two (2) Fire-Water Pumps. All Diesel Fuel Fired. Detailed List in Section I, Condition 6.2 of this Permit						
G024 thru G027 & G029 thru G031	Seven (7) Emergency Generators. All Diesel Fuel Fired. Detailed List in Section I, Condition 6.3 of this Permit.						
B001 & B003	Two (2) Keystone Boilers, 17228/97125 and 17619/97758, rated at 60 and 66 MMBtu/hr, Respectively. Each Natural Gas Fired with Diesel and/or Jet Fuel as Backup.						
B004	Nebraska Type O Boiler, Model No. NOS-2A-58, Serial No. O-4556, rated at 54.4 MMBtu/hr. Natural Gas Fired with Diesel and/or Jet Fuel as Backup.						

Operating Permit Unit ID	Unit Description	Deviations Reported [1]		Monitoring Method per Permit?[2]		Was Compliance - Continuous or Intermittent?[3]	
		Previous	Current	YES	NO	Continuous	Intermittent
C001, C002 and C003	Building 011W Cooling Tower, Building 011 Cooling Tower and Building 003 Cooling Tower						
G032 thru G040	Nine (9) Emergency Generators. All Diesel Fuel Fired. Detailed List in Section I, Condition 6.4 of this Permit.						
G041	One (1) Caterpillar, Model No. C175-16, Diesel Fired Emergency Generator Set, Rated at 4,423 hp (maximum) and 29.2 MMBtu/hr (213.2 gal/hr). Serial No. WYB00390.						
B002	One (1) Cleaver Brooks Boiler, Model No. 4WG-LN, Serial No. T2817-1-1, Rated at 32.66 MMBtu/hr. This boiler burns natural gas as a primary fuel with distillate oil used as a back-up fuel.						
	General Conditions						
	Insignificant Activities [4]						

[1] If deviations were noted in a previous deviation report , put an "X" under "previous". If deviations were noted in the current deviation report (i.e. for the last six months of the annual reporting period), put an "X" under "current". Mark both columns if both apply.

[2] Note whether the method(s) used to determine the compliance status with each term and condition was the method(s) specified in the permit. If it was not, mark "no" and attach additional information/explanation.

[3] Note whether the compliance status with of each term and condition provided was continuous or intermittent. "Intermittent Compliance" can mean either that noncompliance has occurred or that the owner or operator has data sufficient to certify compliance only on an intermittent basis. Certification of intermittent compliance therefore does not necessarily mean that any noncompliance has occurred.

NOTE:

The Periodic Monitoring requirements of the Operating Permit program rule are intended to provide assurance that even in the absence of a continuous system of monitoring the Title V source can demonstrate whether it has operated in continuous compliance for the duration of the reporting period. Therefore, if a source 1) conducts all of the monitoring and recordkeeping required in its permit, even if such activities are done periodically and not continuously, and if 2) such monitoring and recordkeeping does not indicate non-compliance, and if 3) the Responsible Official is not aware of any credible evidence that indicates non-compliance, then the Responsible Official can certify that the emission point(s) in question were in continuous compliance during the applicable time period.

[4] Compliance status for these sources shall be based on a reasonable inquiry using readily available information.

II. Status for Accidental Release Prevention Program:

A. This facility _____ is subject _____ is not subject to the provisions of the Accidental Release Prevention Program (Section 112(r) of the Federal Clean Air Act)

B. If subject: The facility _____ is _____ is not in compliance with all the requirements of section 112(r).

1. A Risk Management Plan _____ will be _____ has been submitted to the appropriate authority and/or the designated central location by the required date.

III. Certification

All information for the Annual Compliance Certification must be certified by a responsible official as defined in Colorado Regulation No. 3, Part A, Section I.B.38. This signed certification document must be packaged with the documents being submitted.

I have reviewed this certification in its entirety and, based on information and belief formed after reasonable inquiry, I certify that the statements and information contained in this certification are true, accurate and complete.

Please note that the Colorado Statutes state that any person who knowingly, as defined in § 18-1-501(6), C.R.S., makes any false material statement, representation, or certification in this document is guilty of a misdemeanor and may be punished in accordance with the provisions of § 25-7 122.1, C.R.S.

Printed or Typed Name Title

Signature Date Signed

NOTE: All compliance certifications shall be submitted to the Air Pollution Control Division and to the Environmental Protection Agency at the addresses listed in Appendix D of this Permit.

APPENDIX D

Notification Addresses

1. **Air Pollution Control Division**

Colorado Department of Public Health and Environment
Air Pollution Control Division
Operating Permits Unit
APCD-SS-B1
4300 Cherry Creek Drive S.
Denver, CO 80246-1530

ATTN: Matt Burgett

2. **United States Environmental Protection Agency**

Compliance Notifications:

Office of Enforcement, Compliance and Environmental Justice
Mail Code 8ENF-T
U.S. Environmental Protection Agency, Region VIII
1595 Wynkoop Street
Denver, CO 80202-1129

Permit Modifications, Off Permit Changes:

Office of Partnerships and Regulatory Assistance
Air and Radiation Programs, 8P-AR
U.S. Environmental Protection Agency, Region VIII
1595 Wynkoop Street
Denver, CO 80202-1129

APPENDIX E

Permit Acronyms

Listed Alphabetically:

AIRS -	Aerometric Information Retrieval System
AP-42 -	EPA Document Compiling Air Pollutant Emission Factors
APEN -	Air Pollution Emission Notice (State of Colorado)
APCD -	Air Pollution Control Division (State of Colorado)
ASTM -	American Society for Testing and Materials
BACT -	Best Available Control Technology
BTU -	British Thermal Unit
CAA -	Clean Air Act (CAAA = Clean Air Act Amendments)
CCR -	Colorado Code of Regulations
CEM -	Continuous Emissions Monitor
CF -	Cubic Feet (SCF = Standard Cubic Feet)
CFR -	Code of Federal Regulations
CO -	Carbon Monoxide
COM -	Continuous Opacity Monitor
CRS -	Colorado Revised Statute
EF -	Emission Factor
EPA -	Environmental Protection Agency
FI -	Fuel Input Rate in MMBtu/hr
FR -	Federal Register
G -	Grams
Gal -	Gallon
GPM -	Gallons per Minute
HAPs -	Hazardous Air Pollutants
HP -	Horsepower
HP-HR -	Horsepower Hour (G/HP-HR = Grams per Horsepower Hour)
LAER -	Lowest Achievable Emission Rate
LBS -	Pounds
M -	Thousand
MM -	Million
MMscf -	Million Standard Cubic Feet
MMscfd -	Million Standard Cubic Feet per Day
N/A or NA -	Not Applicable
NOx -	Nitrogen Oxides
NESHAP -	National Emission Standards for Hazardous Air Pollutants
NSPS -	New Source Performance Standards
P -	Process Weight Rate in Tons/Hr
PE -	Particulate Emissions
PM -	Particulate Matter
PM_{10} -	Particulate Matter Under 10 Microns

PSD -	Prevention of Significant Deterioration
PTE -	Potential To Emit
RACT -	Reasonably Available Control Technology
SCC -	Source Classification Code
SCF -	Standard Cubic Feet
SIC -	Standard Industrial Classification
SO_2 -	Sulfur Dioxide
TPY -	Tons Per Year
TSP -	Total Suspended Particulate
VOC -	Volatile Organic Compounds

APPENDIX F

Permit Modifications

DATE OF REVISION	TYPE OF REVISION	SECTION NUMBER, CONDITION NUMBER	DESCRIPTION OF REVISION
October 7, 2013	Minor Modification	Section I	Removed the statement in Condition 1.1 regarding the application to install a new boiler to replace an existing boiler. Removed "old" Boiler 2 (Keystone S/N 17229) and removed language indicating that the Cleaver Brooks Boiler would replace Boiler 2 from the Table in Condition 6.1.
		Section II.2.	Increased the fuel consumption limit in Condition 2.3. Note that although the throughput limit was increased, an increase in permitted emissions was not necessary. Permit limits for these engines were based on more conservative emission factors than are in the current permit thus it was not necessary to increase permitted emissions. Revised Condition 2.10 to indicate that MACT Subpart ZZZZ requirements promulgated after July 2007 have not been adopted yet.
		Section II.3	Corrected the references to other permit condition numbers in Conditions 3.6.1 and 3.6.5.2. Removed references to "old" Boiler 2 (Keystone S/N 17229).
		Section II.5	Updated Condition 5 to include the latest revisions to 40 CFR Part 60 Subpart IIII and added language indicating what version of Subpart IIII that is in Condition 5.
		Section II.6	The reference to the B002 replacement boiler (Cleaver Brooks boiler) was revised to B002.
		Section II.9	The summary table was revised to refer to this boiler as Unit B002 (Boiler 2). Added a note to Condition 9.5.1 indicating that the notice of construction had been submitted. Conditions 9.10 (commence construction) and 9.12 (send notice that "old" Boiler 2 (Keystone S/N 17229) was removed) were removed since the requirements in those conditions have been completed. Added a "new" condition 9.12 to include fuel oil restrictions that must be met to be considered a gas-fired unit under MACT J^6 and thus exempt from the requirements (language is essentially the same language as in Section II, Condition 3.9).
		Section III	References to "old or existing" Boiler 2 (Keystone S/N 1722) were removed. References to the Cleaver Brooks Boiler (B002 Replacement) were replaced with Boiler 2.
		Appendix A	Language was added to the insignificant activity list to indicate those categories for which records should be available to verify insignificant activity status. In addition, the category for "landscaping and site housekeeping" devices was removed and so was the toner testing hood (was listed under chemical storage tanks/containers < 500 gal category).
		Appendices B & C	Removed "old" Boiler 2 (Keystone S/N 17229) and removed language indicating that the Cleaver Brooks Boiler would replace Boiler 2. Corrected the description of Boiler 4